TC970

IN-BUILT CLEAN AIR INDOOR WOOD FIREPLACE

Installation and Operation Manual

FIRE BY escea.

Contents

A IMPORTANT INFORMATION

DO NOT DISCARD THIS MANUAL AS IMPORTANT OPERATING AND MAINTENANCE INSTRUCTIONS ARE INCLUDED.

UNDER NO CIRCUMSTANCES IS THIS APPLIANCE TO BE MODIFIED, DOING SO WILL VOID THE WARRANTY.

READ, UNDERSTAND AND FOLLOW THESE INSTRUCTIONS FOR THE SAFE INSTALLATION AND OPERATION.

LEAVE THIS INSTALLATION MANUAL WITH FIREPLACE OWNER.

A1. SAFETY NOTICES

1. This fireplace and flue system must be installed in accordance with these instructions and *AS/NZS 2918:2001* and the appropriate requirements of any relevant local/national building codes. Escea recommends the use of a NZHHA Installer.
2. Any modification of the appliance that has not been approved in writing by the testing authority is considered to be in breach of any approval granted for compliance with *AS/NZS 4012:2014* & *AS/NZS 4013:2014.*
3. This appliance is not intended for use by persons (including children) with physical sensory, or mental capabilities or lack of experience and knowledge unless they have been given supervision or instruction concerning the use of the appliance by a person responsible for their safety. Never leave children, infants, elderly or infirm persons unattended around the appliance as surfaces and radiant heat can cause injuries.
4. Mixing of appliance or flue system components from different sources or modifying the dimensional specification of components may result in hazardous conditions. Where such action is considered, Escea Ltd should be consulted at the first instance.
5. The use of accelerants i.e. petrol, lighter fluid to light the appliance is not permitted, the use of fire-lighters or paper are. Be careful to keep all flammable items i.e. liquids, clothing, furniture, fuel at a safe distance from the appliance.
6. This appliance uses a direct vent air intake system via the flue casings and requires the door to be shut while in use. DO NOT leave the door open during the light up phase, only open the door during refuelling and minimise the time the door is open.
7. Never attempt to clean the appliance nor empty ash whilst it is hot. Dispose of ash only into a non-combustible bucket. It is recommended to leave approximately 25mm of ash in the base of the fireplace during use.
8. This appliance is designed to burn only dry seasoned softwood with a moisture content of 16-20%. Do not burn wood that has been treated with preservatives laminated wood or wood that has been contaminated with oils or painted.
9. Do not operate the appliance if the glass is cracked or if there is a constant smell of fumes, as these issues can be harmful. Contact Escea for a list of recommended service technicians.
10. Do not overload (firebox filled more than 50%) this fireplace. This may result in property damage or personal injury.

A2. WARRANTY INFORMATION

Escea warranties this solid fuel fireplace in accordance with the Escea Fireplace Warranty Terms and Conditions, which can be found on the Escea website: www.escea.com
A warranty will be voided where defects, malfunctions or failures are caused by, but not limited to, incorrect installation, normal wear and tear, misuse, neglect, lack of proper and regular maintenance, accidental damage any other alteration, or failure to follow operating instructions in the installation manual. To make a warranty claim, please contact the retailer from whom the appliance was purchased from, or refer to the Escea Fireplace Warranty Terms and Conditions, which can be found on the Escea website: www.escea.com
Due to ongoing product development, Escea reserves the right to change any specifications listed in these instructions or warranty without notice. This solid fuel fireplace is manufactured by:

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Dunedin 9013
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B FIREPLACE INFORMATION

B1. FIREPLACE SPECIFICATIONS

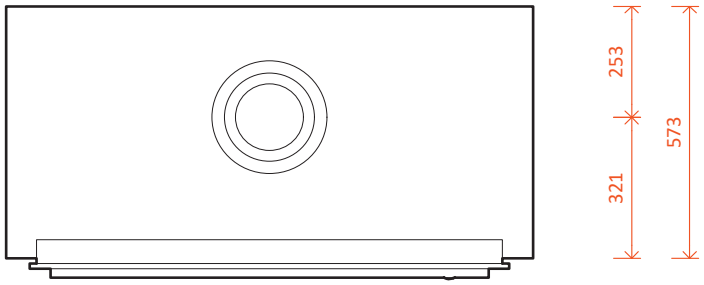
The TC970 is an in-built wood fireplace, constructed from 4mm painted mild steel panels with a 5mm glass door and utilises a direct vent co-axial flue system, negating the need for room air for combustion. The fireplace is supplied with a Zero Clearance Kit for installation into timber framed and masonry cavities.

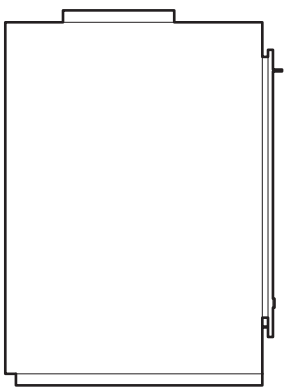
SPECIFICATIONS	TC970
Fuel Type	Softwood Only
Emissions - NES	0.93 g/kg
Efficiency - NES	66%
Output - Average (kW)	13 kW
Output - Peak (kW)	17.5 kW
ECAN Authorisation Number	260563
Firebox Volume	102L
Weight	260Kg
Damper Control	Top right
Wet-back	Prohibited
Flue Type	Natural Draught Direct Vent
Flue Length	4.6m from Floor Protector

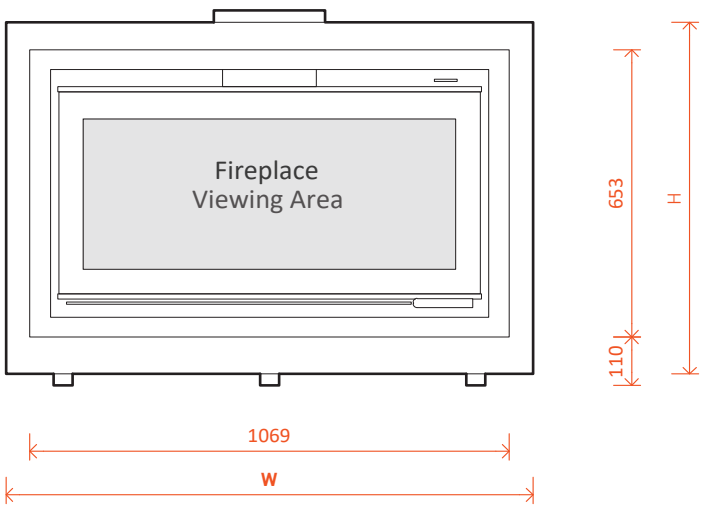
B2. FIREPLACE DIMENSIONS

TC970 with Zero Clearance Kit

Fireplace Width (W)	1175mm
Fireplace Height (H)	800mm
Fireplace Depth (D)	573mm
Fireplace Viewing Area	945mm x 483mm

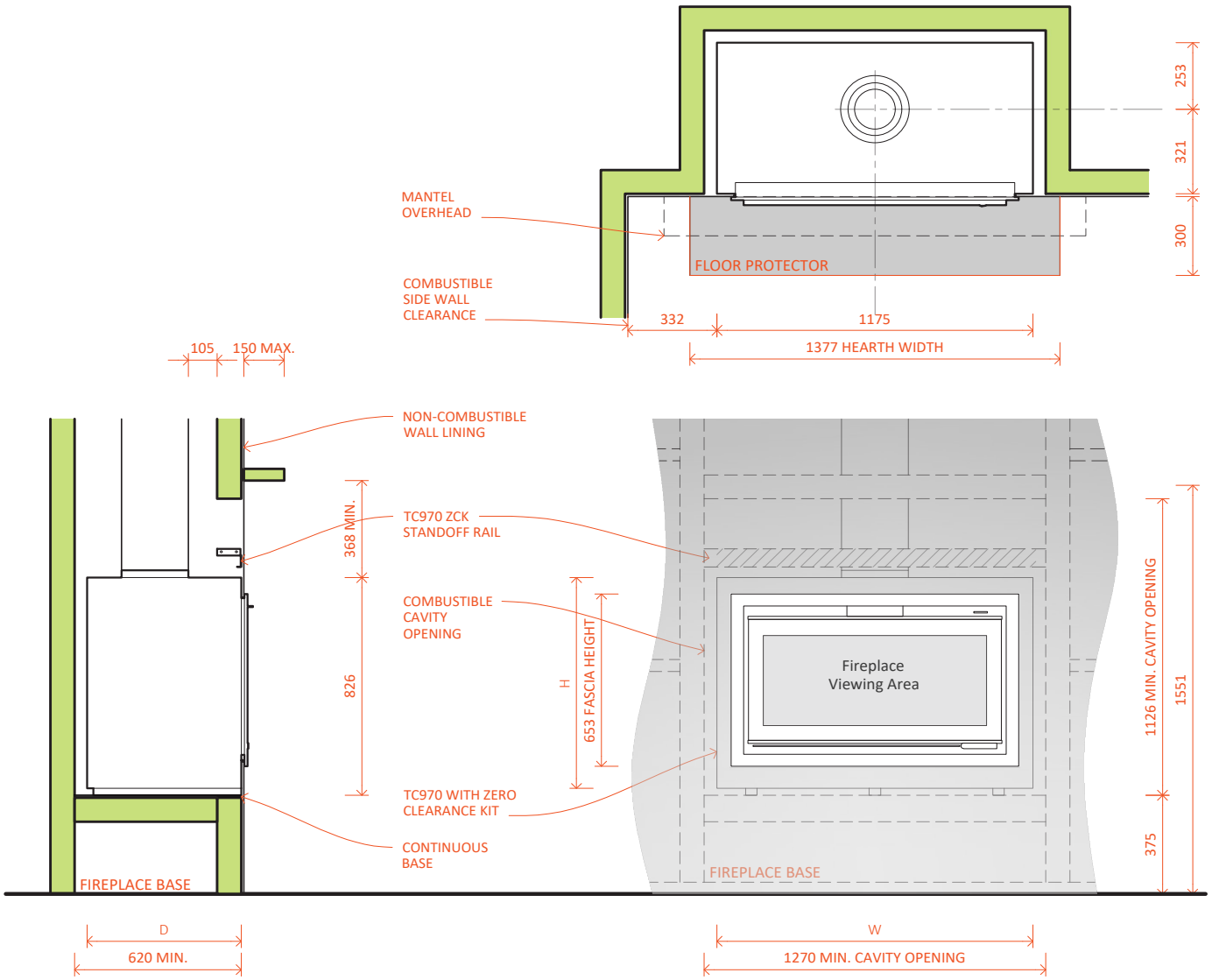






B3. CAVITY DIMENSIONS

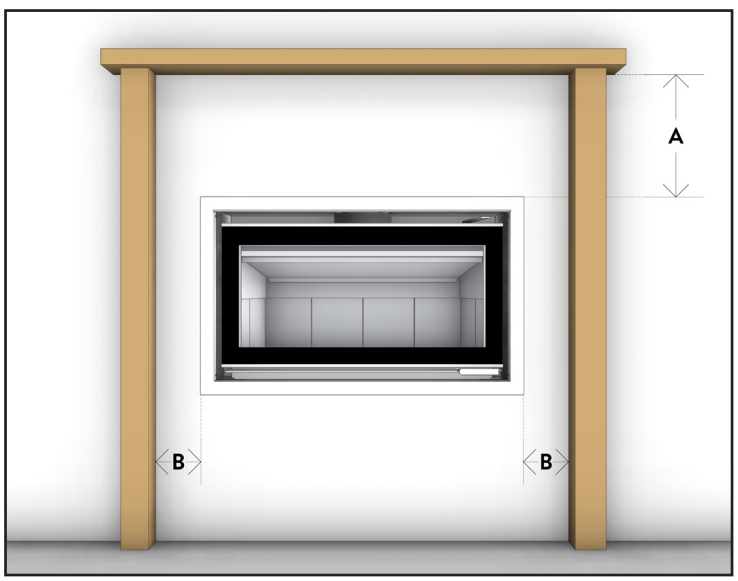
Clearances to combustibles are defined in accordance with *AS/NZS 2918 Appendix B*. Objects in front of the fireplace must maintain a 1.2m safety distance.



B4. HEARTH REQUIREMENTS

In all instances an insulated hearth or floor protector is required underneath a TC970 Inbuilt Wood Fireplace, when installed onto a combustible floor. Whether a floor protector or an insulating hearth is required, will depend on the installation height of the fireplace. *See Sec B10 for base and hearth options.*

For a fireplace base elevated 375mm or more above a combustible floor, a continuous non-combustible floor protector only, is required with the minimum dimensions: **1393mm W x 300mm D** (measured from the adjacent wall surface). This can be any non-combustible and heat resistant material, with a minimum thickness of 1.5mm.



B5. MANTEL CLEARANCES

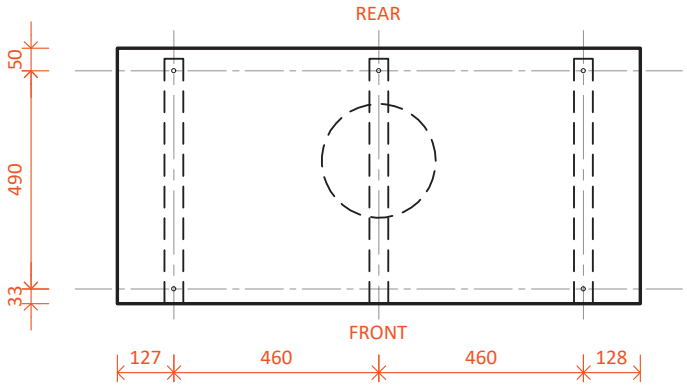
Non-combustible and heat resistant mantels can be at any height and depth. Combustible mantels are to be:

CLEARANCE		MAX. DEPTH
A	405mm	150mm
B	150mm	100mm

B6. FIREPLACE RESTRAINT

The TC970 must be restrained to its base. This has 3 steps:

- Step 1 - Fix the 3 supplied Zero Clearance Base Supports to the fireplace base in the layout below. Fixing through the lower flanges, into a structural material.
- Step 2 - Locate the corresponding holes on the zero clearance kit base towards the rear of the ZCK. Screw fix through these holes into the Zero Clearance Base Supports using 6G Tek Screws or equivalent.
- Step 3 - After installation of the TC970 Firebox and cabinet, locate the front holes in the ZCK. Screw fix through these holes into the Zero Clearance Base Supports using 6G Tek Screws or equivalent. To access these holes the door should be removed. Refer to Section B10 Step 3.



Timber Construction: M6 Tek Screws or Coach Screws *(length will vary with floor construction)*

Concrete Construction: M6 Concrete Anchors *(length will vary with floor construction)*

B7. MASONRY INSTALLATIONS

In all instances Escea recommends the use of the TC970 Zero Clearance Kit when specifying or installing the TC970 In-Built wood fireplace. The installation of the TC970 In-Built wood fireplace into a masonry or non-combustible cavity, without the use of the TC970 Zero Clearance Kit is outside the scope of the these installation instructions, and will require compliance with *AS/NZS 2918* as an untested solution. Please refer to *AS/NZS 2918* for the recommended clearances.

B8. WALL LININGS

The wall substrate must be a minimum of 9mm JH Villaboard fibre cement sheet or equivalent. It can be bonded to the timber framework as required by the board manufacturer, and above the opening of the fireplace (to the ZCK standoff rail) using high temperature silicone.

B9. CHIMNEY CHASE VENTILATION

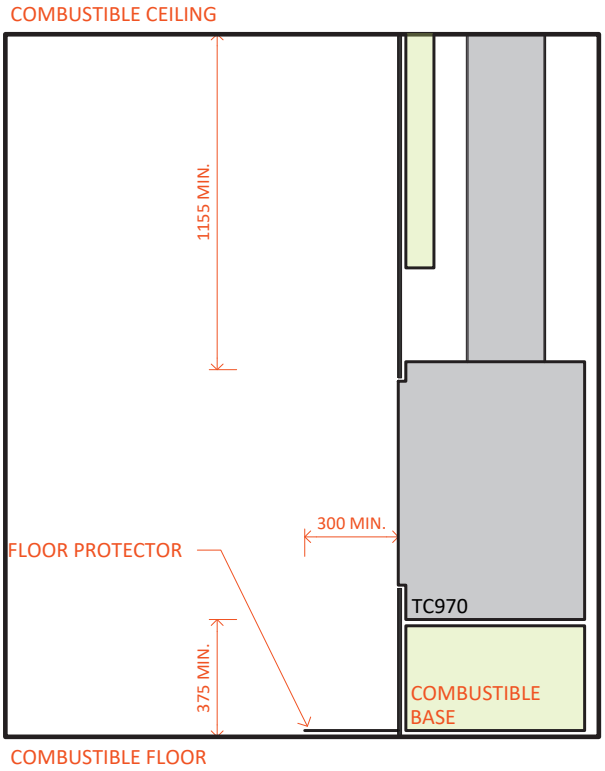
Ventilation of the Zero Clearance Kit is not required, from either inside or outside the building.

Ventilation of the chimney chase is required in accordance with *AS/NZS 2918 Sec. 3.4.2.2* by way of an intake vent at the base of the chimney chase (10,000mm² free open area), and an outlet vent at the top of the chimney chase (10,000mm² free open area). This can be from inside, and stay within the building, or from outside the building. See Sec C12 of these instructions for chase detailing.

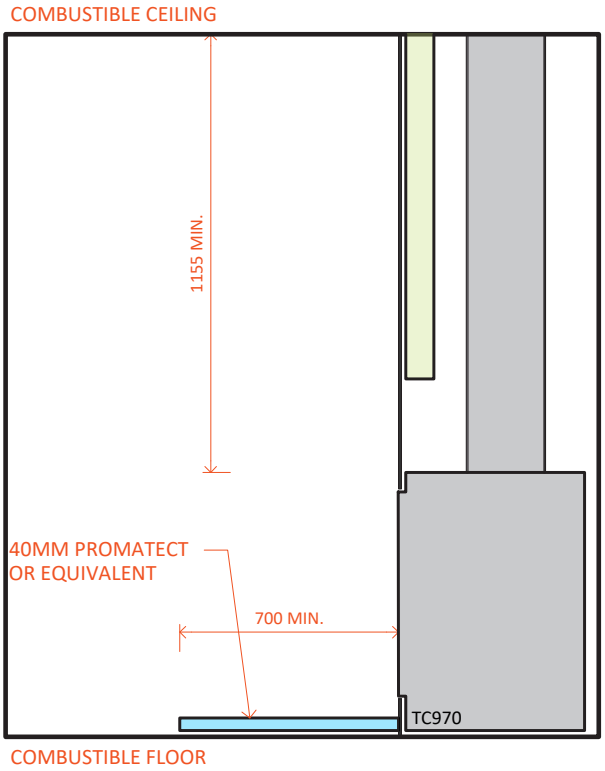
B10. BASE REQUIREMENTS

The TC970 must sit on a continuous base, either made from combustible or non-combustible materials, is essential to take the weight of the appliance and flue system above. The continuous surface must be at least 10mm thickness.
When specifying or installing a raised hearth or base, follow the directions over the page. A combustible hearth directly below and in front, of the TC970 viewing area, must be protected from exposure to heat, by use of an insulating board. *See over page for base and hearth options.*

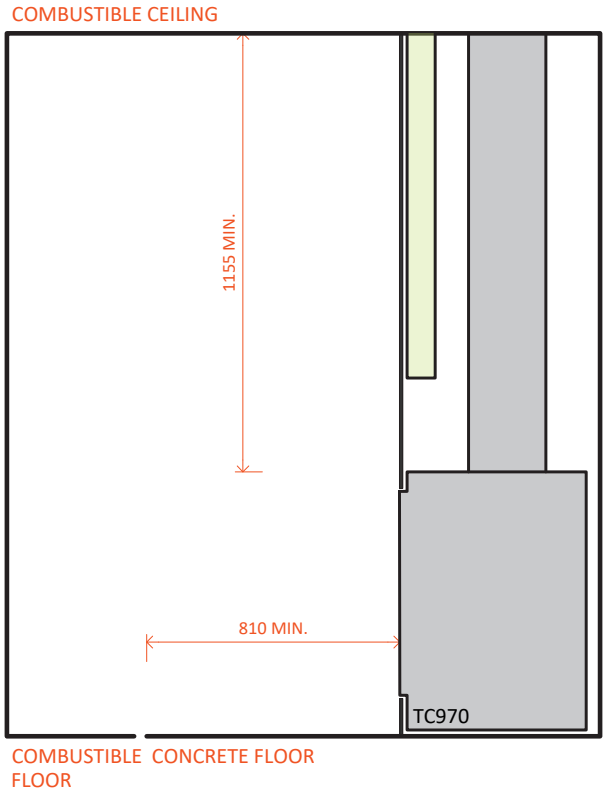
Standard Installation



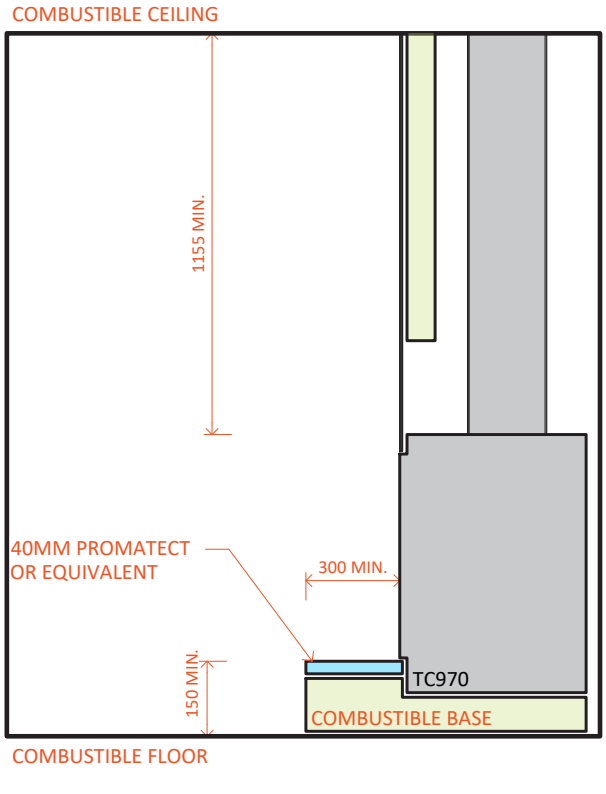
Combustible Floor Installation



Floor Installation



Raised Hearth Installation



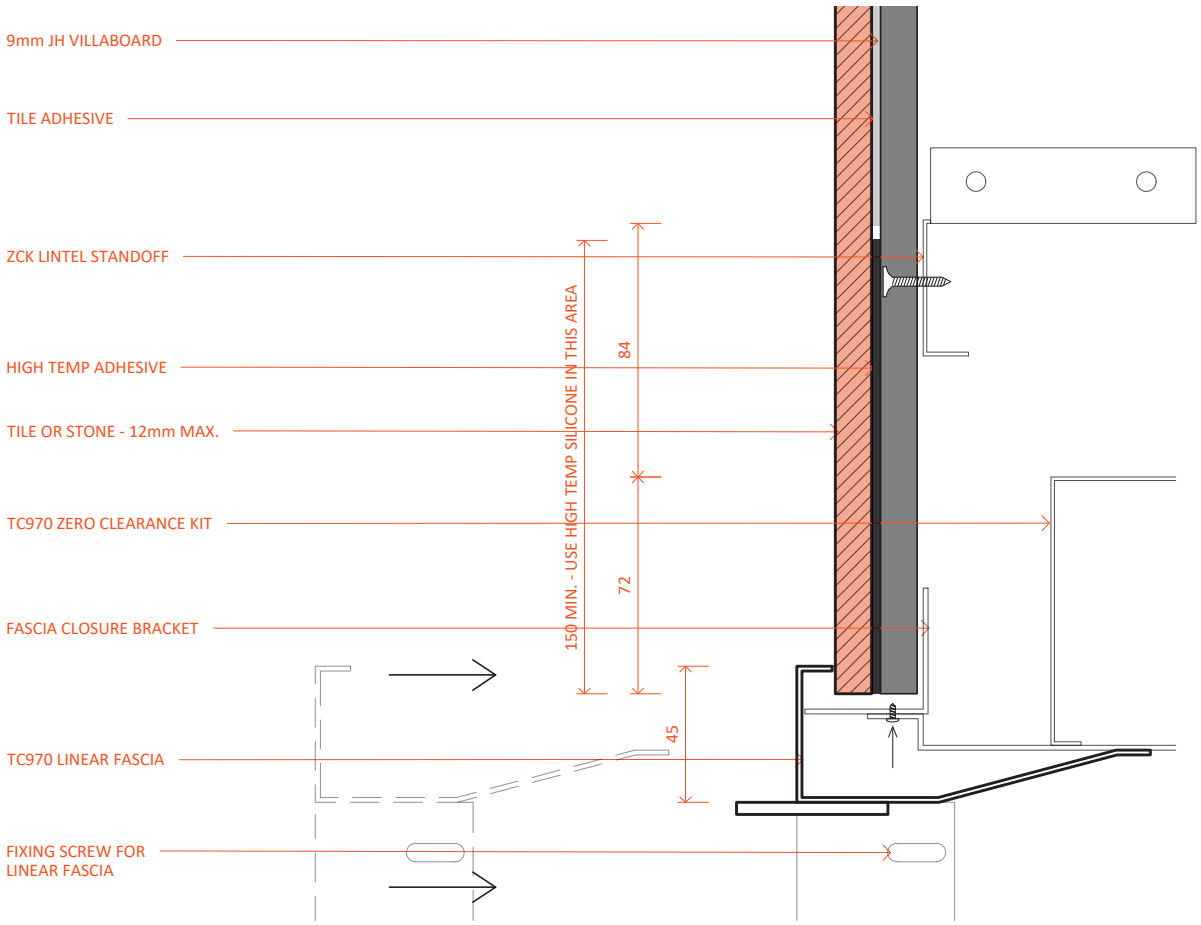
Please Note: Promatect is used for its insulation and non-combustible properties. Choose equivalent boards that are:

- Calcium silica or calcium mineral based.
- Have a thermal conductivity of less than **0.164 W/m²K.**

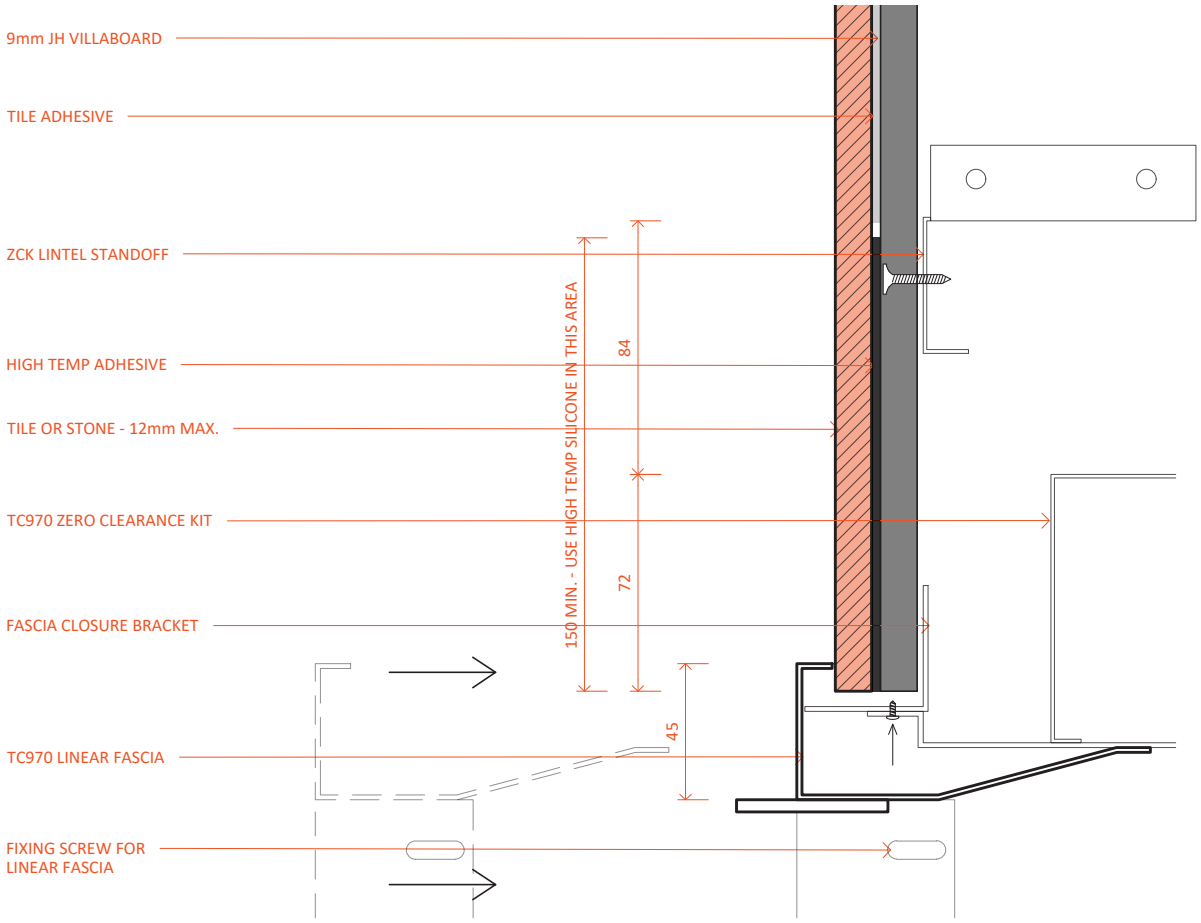
B11. FINISHING OPTIONS

Below are diagrams showing the interaction of the Linear Fascia with various non-combustible wall liniings.

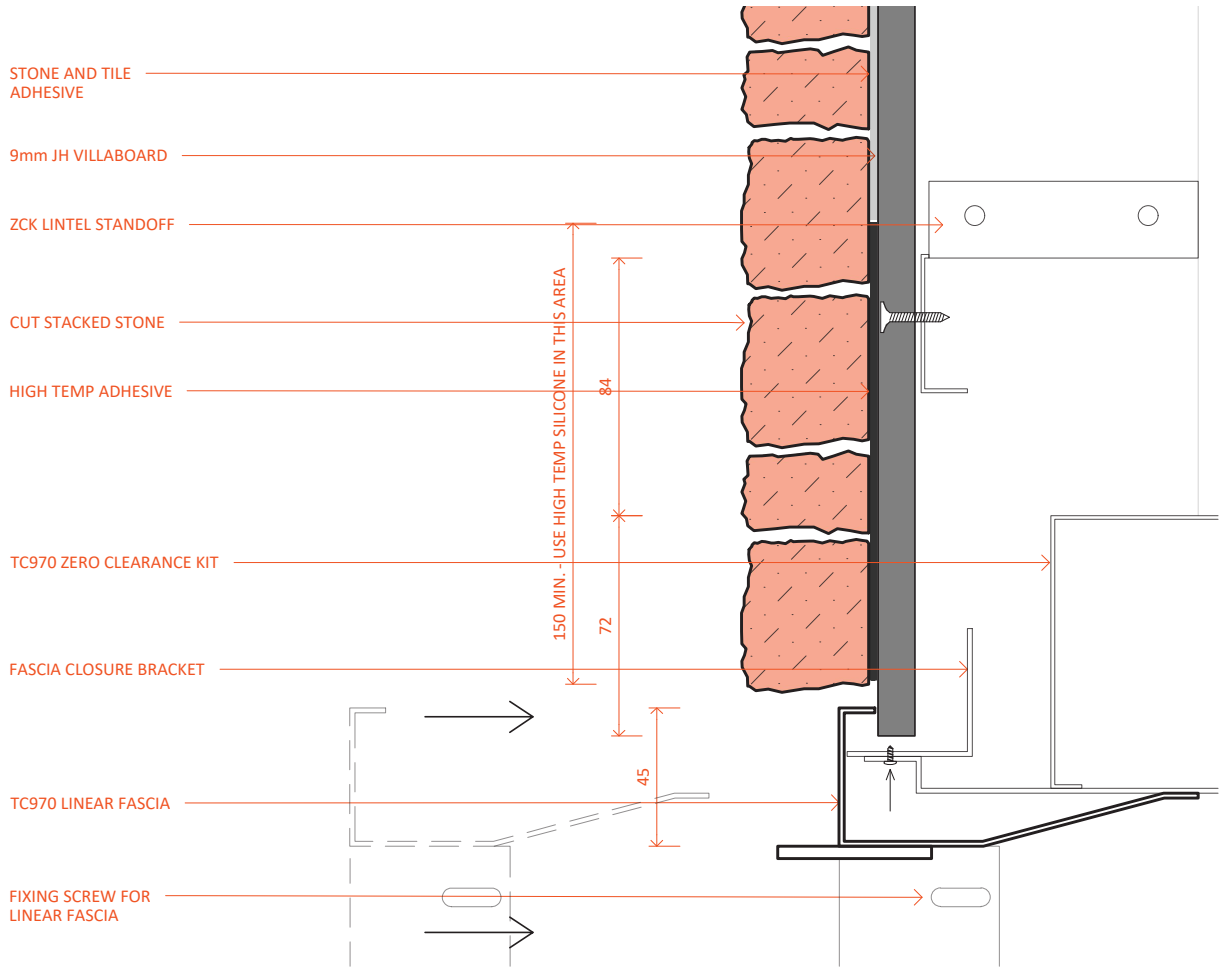
Plaster Finish



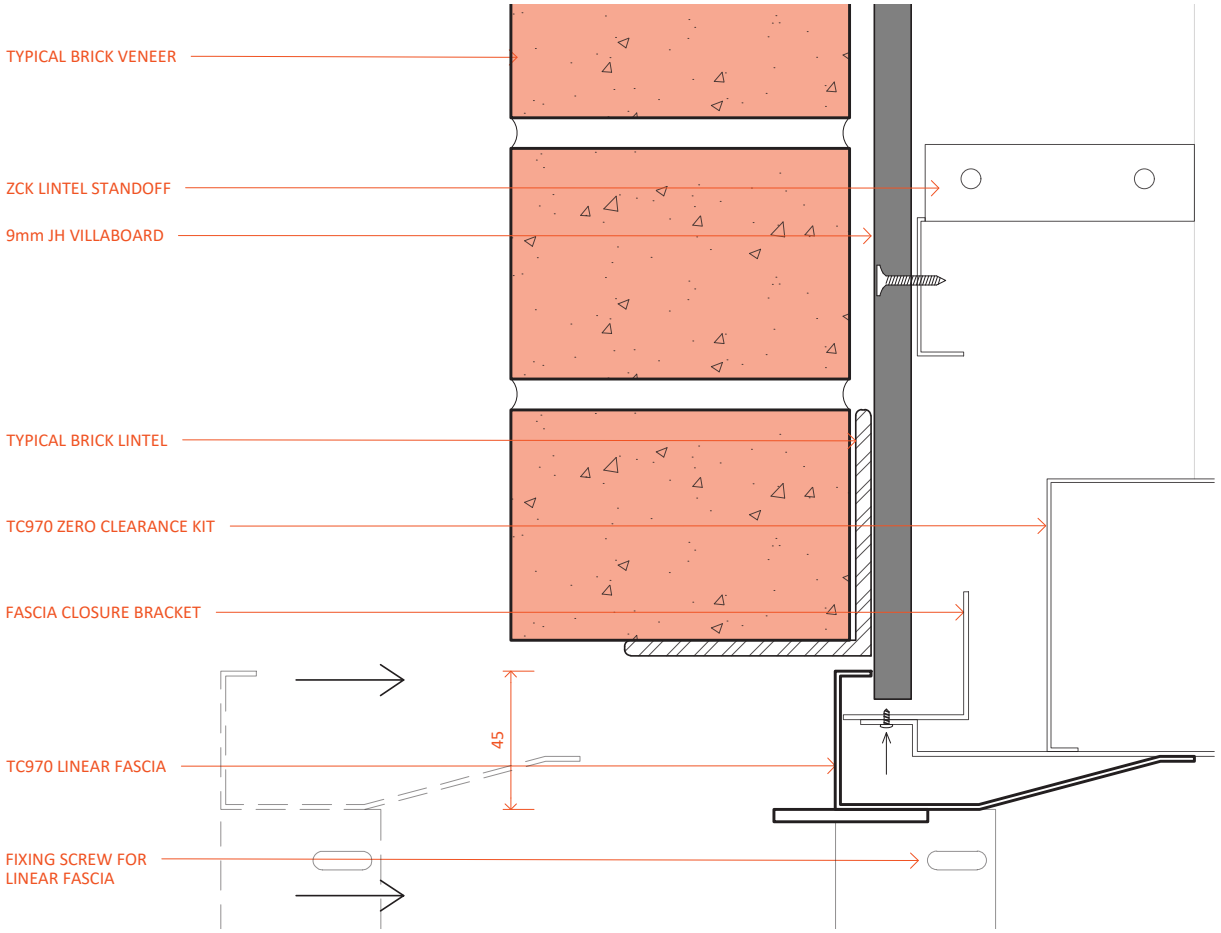
12mm Tile or Stone Finish



Cut Faced Stone Finish



Brick Veneer Finish

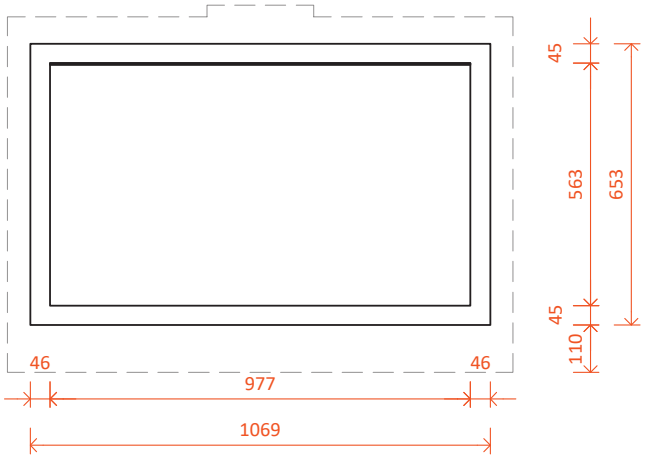


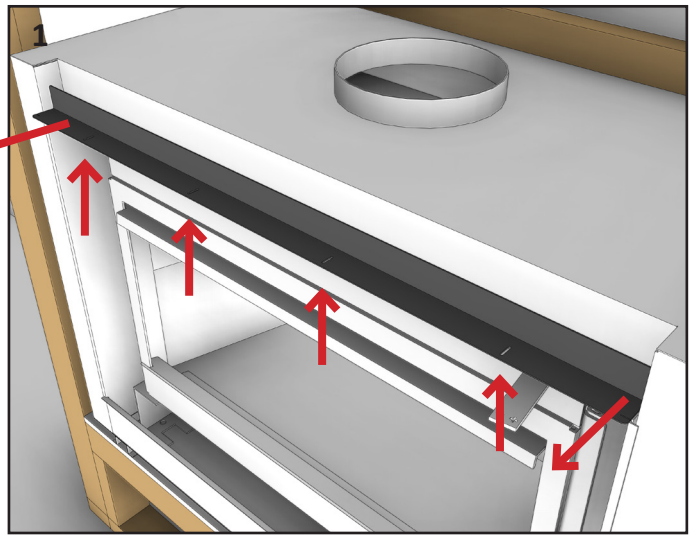
B12. FASCIA INSTALLATION

The TC970 Linear Fascia is designed to overlap the selected wall finish, whether plaster based finishes, 10mm porcelain tile or sheet metal. The fascia is mandatory.

The wall substrate/finished lining must be a minimum of 9mm JH Villaboard fibre cement sheet or equivalent.

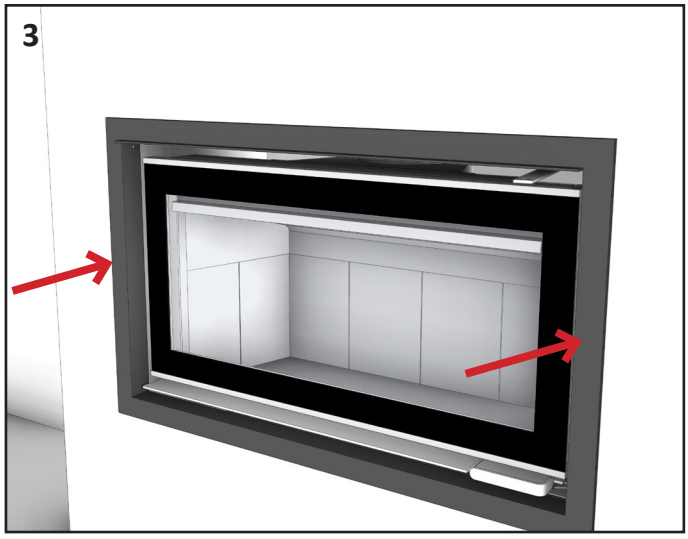
Wall linings deeper than 20mm must be installed outside the fascia as shown in Sec B11.
Fascia dimensions are shown on the right. The fascia sits proud of the wall by 10mm.



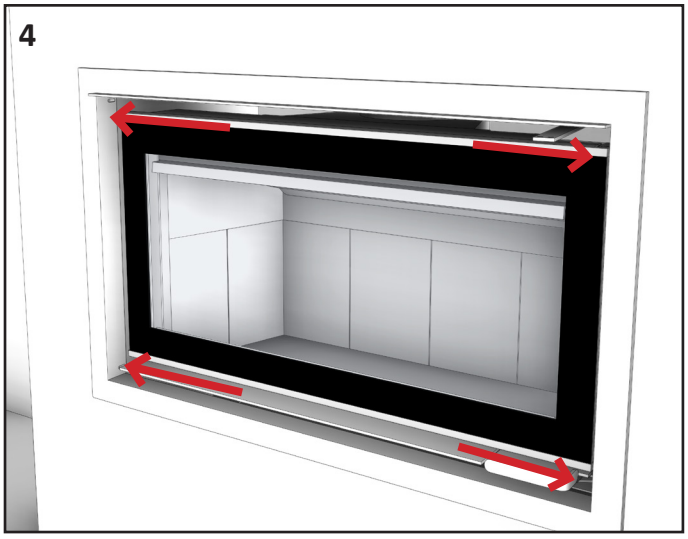


During the Fireplace installation, fit the fascia closure bracket to the zero clearance kit using the 4x screws. Do not tighten fully, just enough to allow the bracket to move with minimal force. The wall lining has been removed for clarity.

Align the fascia closure bracket, by pulling forward to have the up-stand in line with the ZCK or the back of the wall lining.

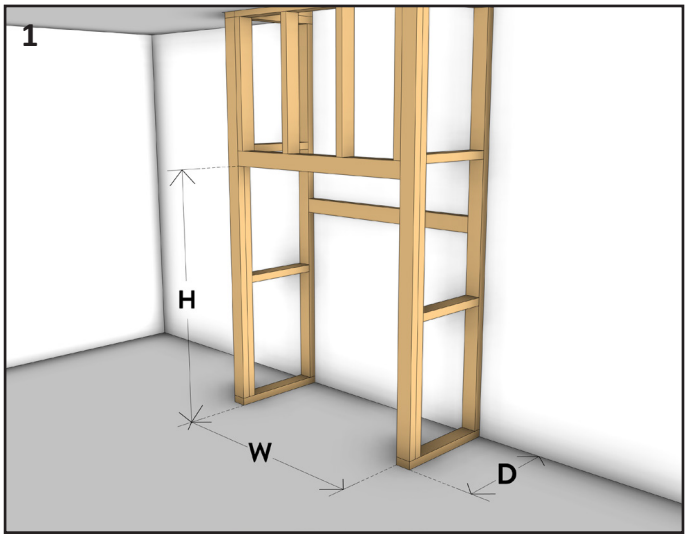


Fit the fascia to the fireplace. It will go on square to the wall. As you push the fascia back, the fascia closure bracket should rest against the inside face of the fascia. Push back to form a snug fit of the fascia against the wall.

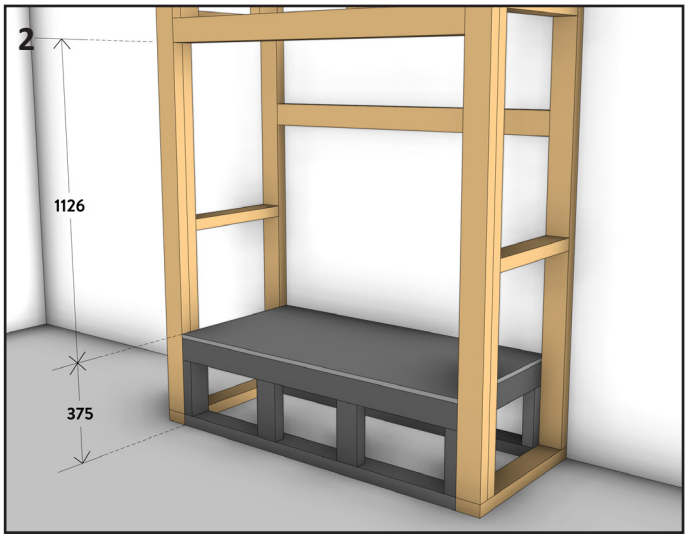


Locate the 4 supplied screws into the sides of the fascia as indicted above. This will keep the fascia from moving. Fascia install is complete.

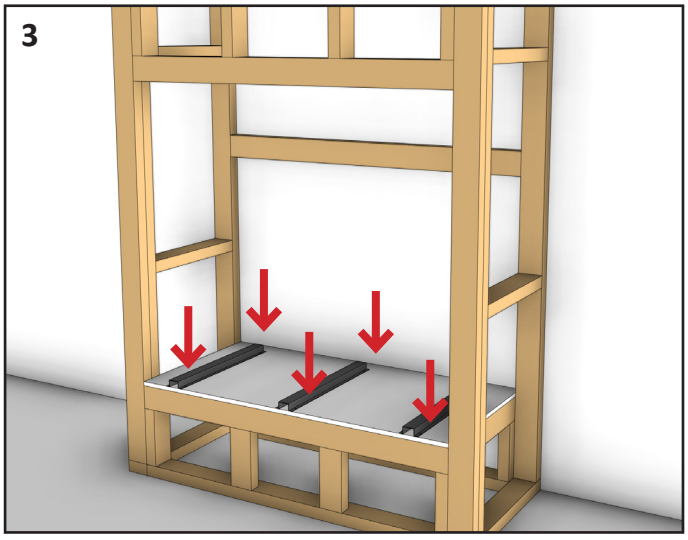
B13. FIREPLACE INSTALLATION



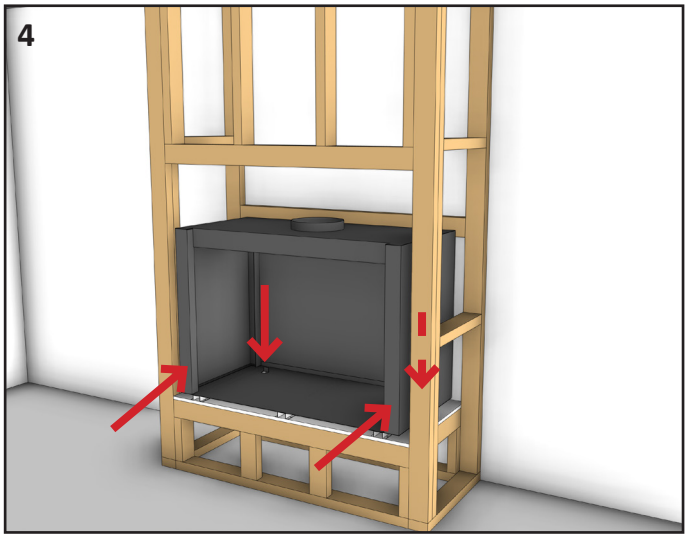
Locate the flue centreline from inside the building. Ensure the centreline is clear of any structural elements. Build the wall cavity to the required dimensions of: 1270mm W x 1551mm H x 620mm D.



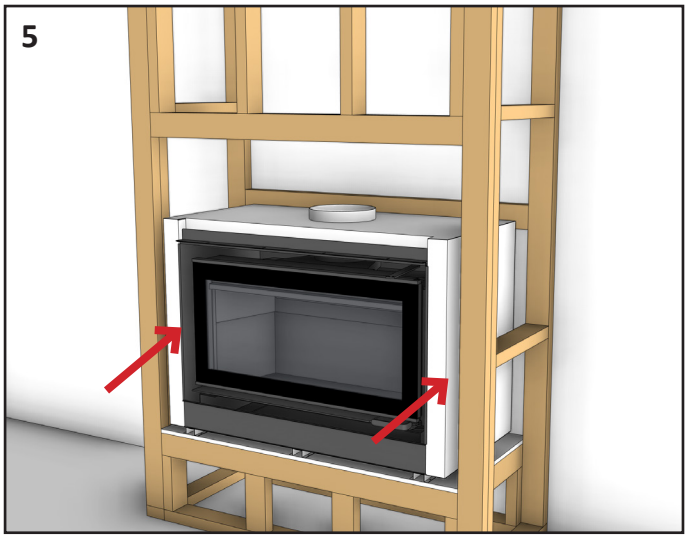
Build the TC970 base ensuring a 10mm continuous upper surface. This can be a combustible or non-combustible material.



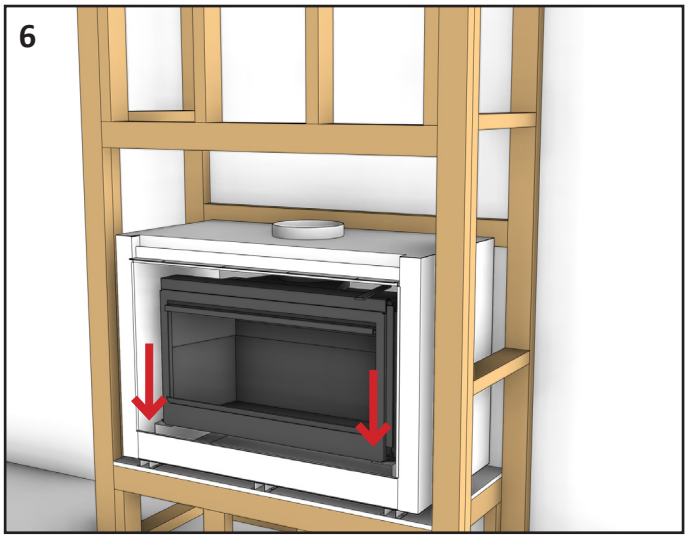
Fix down into the Zero Clearance Kit support rails through the side flanges and into a structural material, using 6G Tek Screws. Align the rails to the front edge of the base. *See section B6.*



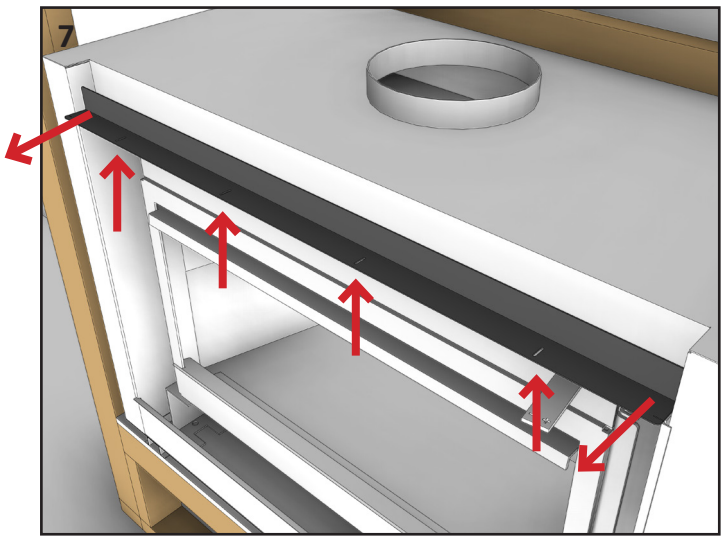
Build the Zero Clearance Kit following the instructions provided and slide into the cavity opening. Centre in the cavity and align the Zero Clearance Kit to the front edge of the base. Fix through the ZCK base and into the outer ZCK support rails within 20mm from the inner back panel, using 6G Tek Screws *(see section B5)*.



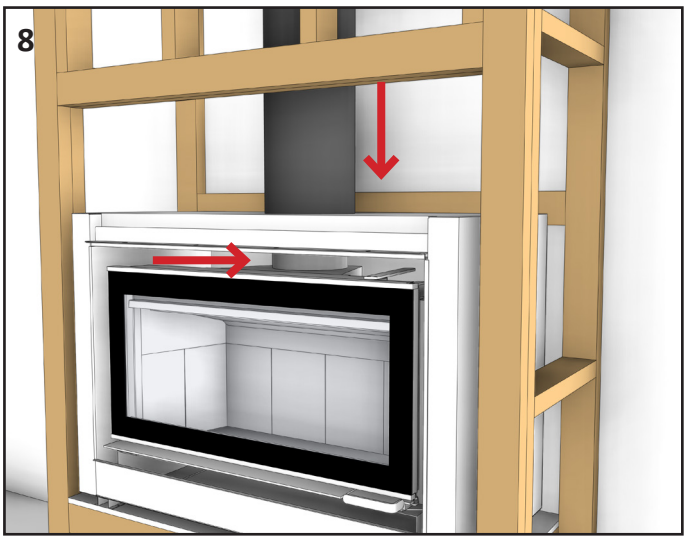
Slide in the TC970 fireplace into the Zero Clearance Kit, until it hits the upturned tabs at the rear of the ZCK.



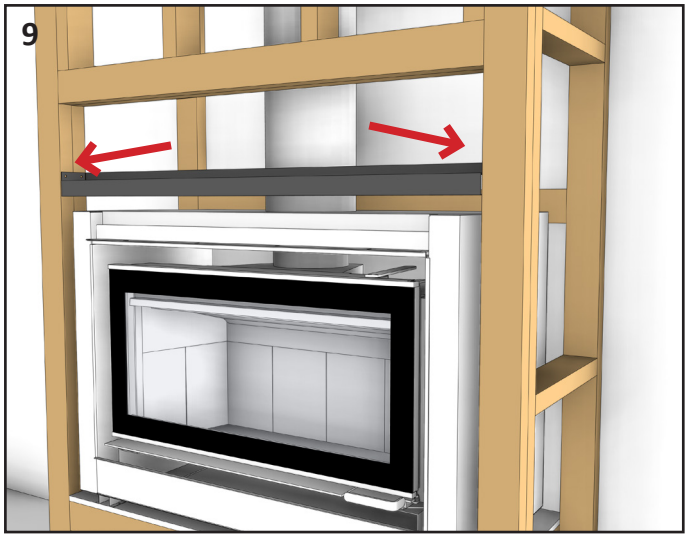
Remove the door and set aside. This allows access to inside the TC970 cabinet. Secure the TC970 fireplace to the Zero Clearance Kit into the ZCK Support Rails, using 6G Tek Screws.



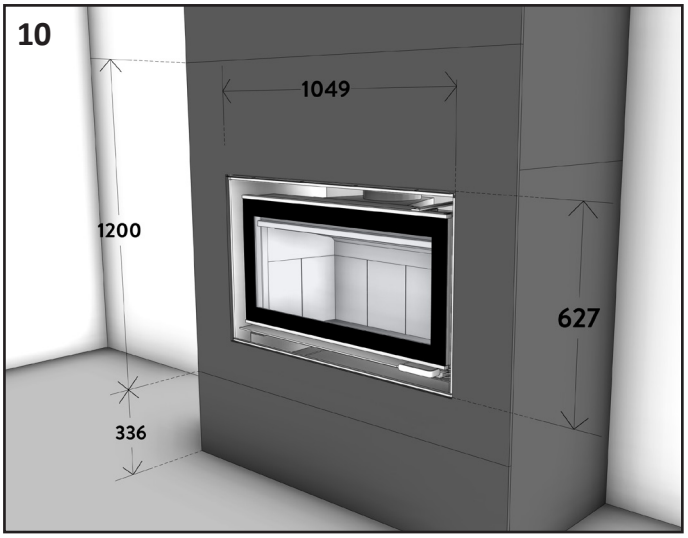
Fit the fascia closure bracket to the zero clearance kit using the 4x screws. Do not tighten fully, just enough to allow the bracket to move with minimal force.



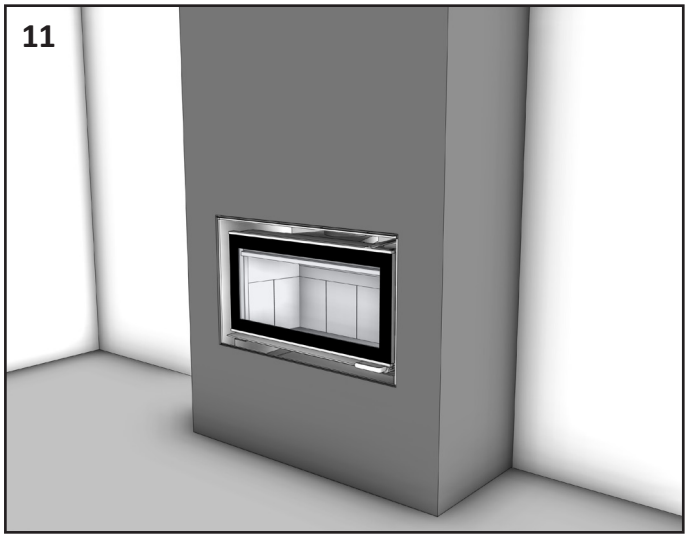
At this point the flue system can be installed. Follow the information in the supplied User Instructions to install the fireplace components.



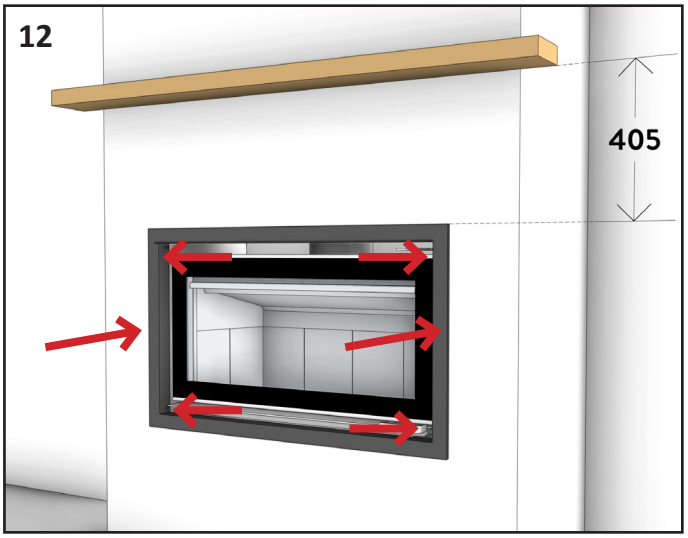
Install the supplied wall lining fixing rail, 40mm above the Zero Clearance Kit.



Install min. 9mm Villaboard or equiv. (In accordance with the board manufacturers instructions) up to the TC970 opening, following the above dimensions for sizing of the cut out. Ensure to have a full sheet over the opening as indicated above. Use High-Temp silicone for bonding around the TC970 ZCK.



Finish the wall to the desired surface finish or with additional linings. All wall linings and finish materials must be non-combustible to the front face.



Attach the TC970 Fascia to the fireplace using the supplied screws, keeping a snug finish against the wall (*see section B12*). If a mantel is desired install to the above dimension. Installation is complete.

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C FLUE INFORMATION

C1. FLUE SPECIFICATIONS

The Escea TC970 in-built wood fire flue comprises a direct vent triple-skin flue system from the fireplace to the flue cone. A proprietary cowl is used to finish the flue system above the roof.

SPECIFICATIONS	TC970 NZ
Flue Size	150mm Exhaust/200mm Intake/250mm Outer
Compliance	Tested to *AS/NZS 2918 Appendix F*
Flue Type	Natural Draught Direct Vent
Flue Minimum Length	4.6m from Floor Protector
Flue Heat Shield	Not Required

C2. FLUE COMPONENTS

The TC970 In-built Wood Fire flue system comprises:

- 150mm Ø Stainless Steel flue (3x 1.2m)
- 150mm Ø Stainless Steel flue (1x 150mm)
- 200mm Ø Stainless Steel Black Liner (2x 1.2m)
- 200mm Ø Stainless Steel Liner (3x 1.2m)
- 250mm Ø Galvanised Flue Liner (3x 1.2m)
- Use a triple skin flue configuration for the entire length of the flue, including through the chimney cavity, roof space, wall or floor.
- Triple Skin Extension Kits 1200mm (150/200/250mm Ø) are available. *These may not be required on all installations.*
- Start the installation with flue components from the **Escea In-built Flue Kit,** add any **Triple Skin Offset Kit** (where required) and finish with a **Triple Skin Flue Extension Kit** (where required).

C3. SAFETY CLEARANCES

A minimum of 25mm must be maintained from the 250mm outer flue liner to any adjacent combustible material or surface.

C4. FLUE FLASHING

All roof or wall penetrations are to be made weather-tight by way of a flashing plate, or proprietary EPDM boot flashing, for compliance with *NZ Building Code E2*. The specification and installation of the flue flashing is the responsibility of the Specifier and/or Installer.

C5. FLUE RESTRAINT

The flue pipe is to have a close fitting connection to the fireplace by way of:

- The spigot and 150mm Ø flue joint to be sealed with a high temperature fire cement, and
- Mechanically connect the flue to the flue spigot by drilling a 5mm pilot hole through the 200mm flue liner using the hole in the spigot. Using an Extension Bit, screw through the 200mm Ø flue into the 150mm Ø flue, using the 12G x 40 SS Tek Screw (supplied with the fireplace), between the ZCK and the firebox. *Refer to Sec. B13 Step 4.*

All joints between sections of the flue pipes, shall be secured by at least 3 fasteners spaced approximately equally around the joint, as to avoid flue pipe separation.

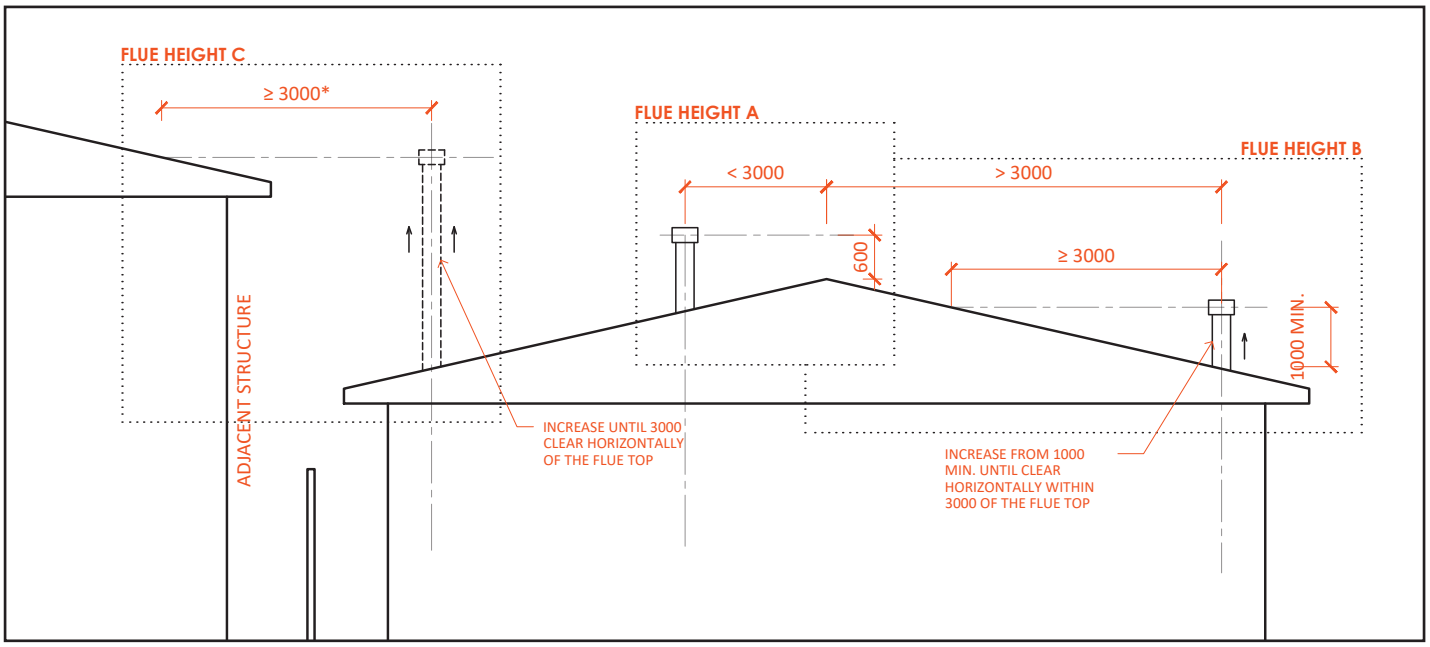
Where the flue above the roof must be restrained in accordance with *AS/NZS 2918:2001* and local regulations. Where a flue is not contained within a chimney, restrain the flue at intervals of not greater than 3m with compatible telescopic or fixed stays. Allow for thermal expansion when fitting brackets or stays.

C6. EXTERNAL CLEARANCES

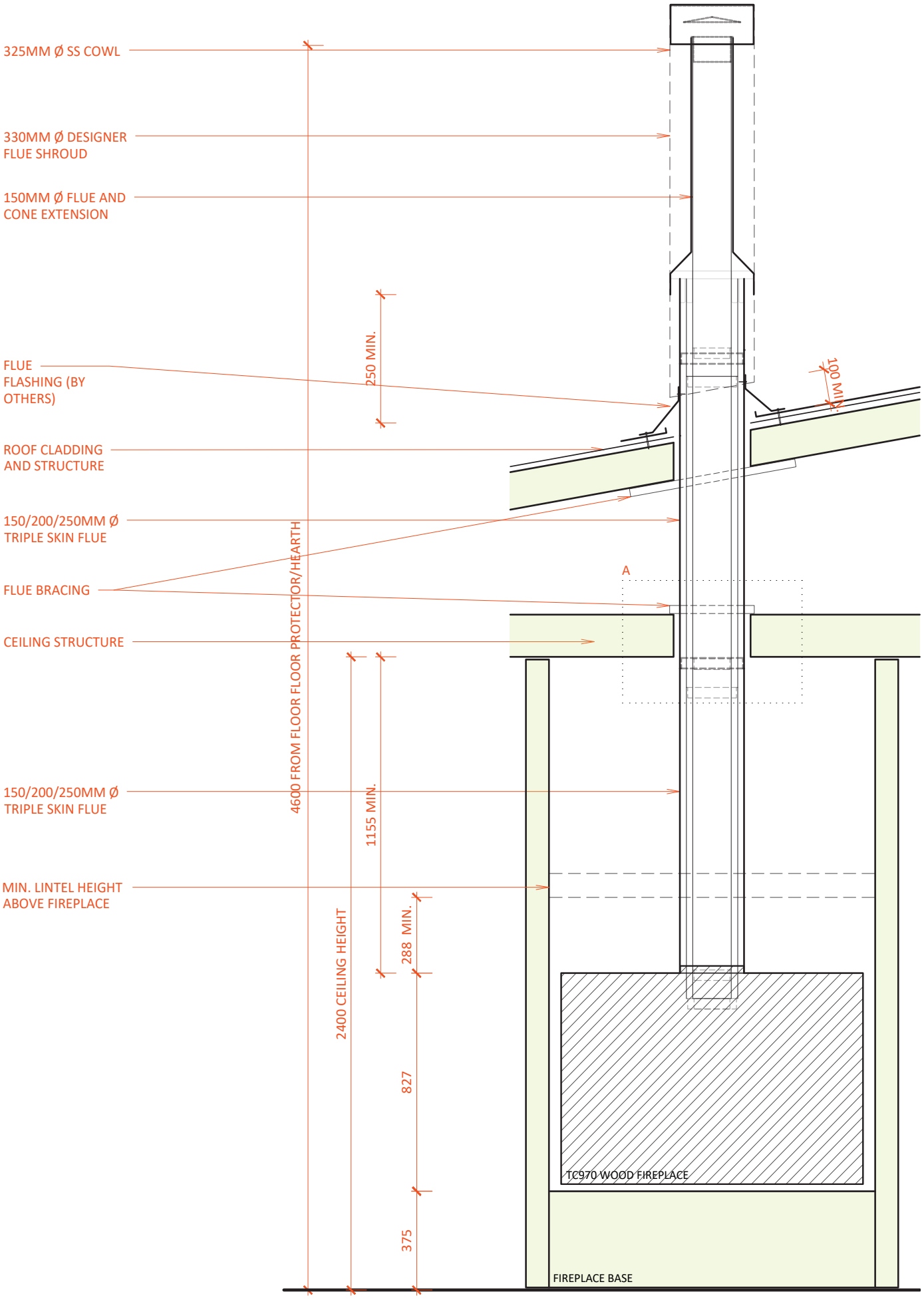
Flue height should be the greater of the minimum flue length and the requirements of *AS/NZS 2918:2001 External Clearances. AS/NZS 2918:2001 External Clearances* are to ensure that the flue cowl is not obstructed from any adjacent buildings or structures. *Please note: a decrease in flue length will increase the chance of smoke spillage, while an increase in length can reduce the burn time.*

See diagram below for external clearance requirements:

- Select **Flue Height A** where the flue cowl is within 3m (horizontally) of the highest point of the roof.
- Select **Flue Height B** where the flue cowl is more 3m (horizontally) of the highest point of the roof. The cowl height must be raised until a 3m horizontal line no longer intersects with the roof.
- **Flue Height C** may also be required where the flue cowl is less than 3m (horizontally) away from an adjacent building or wall. The cowl height must be raised until a 3m horizontal line no longer intersects with the roof.
  * In Australia this dimension is 6000mm, for compliance with *AS/NZS 2918:2018.*



C7. FLUE DETAIL



C8. EXTERNAL WALL PENETRATIONS

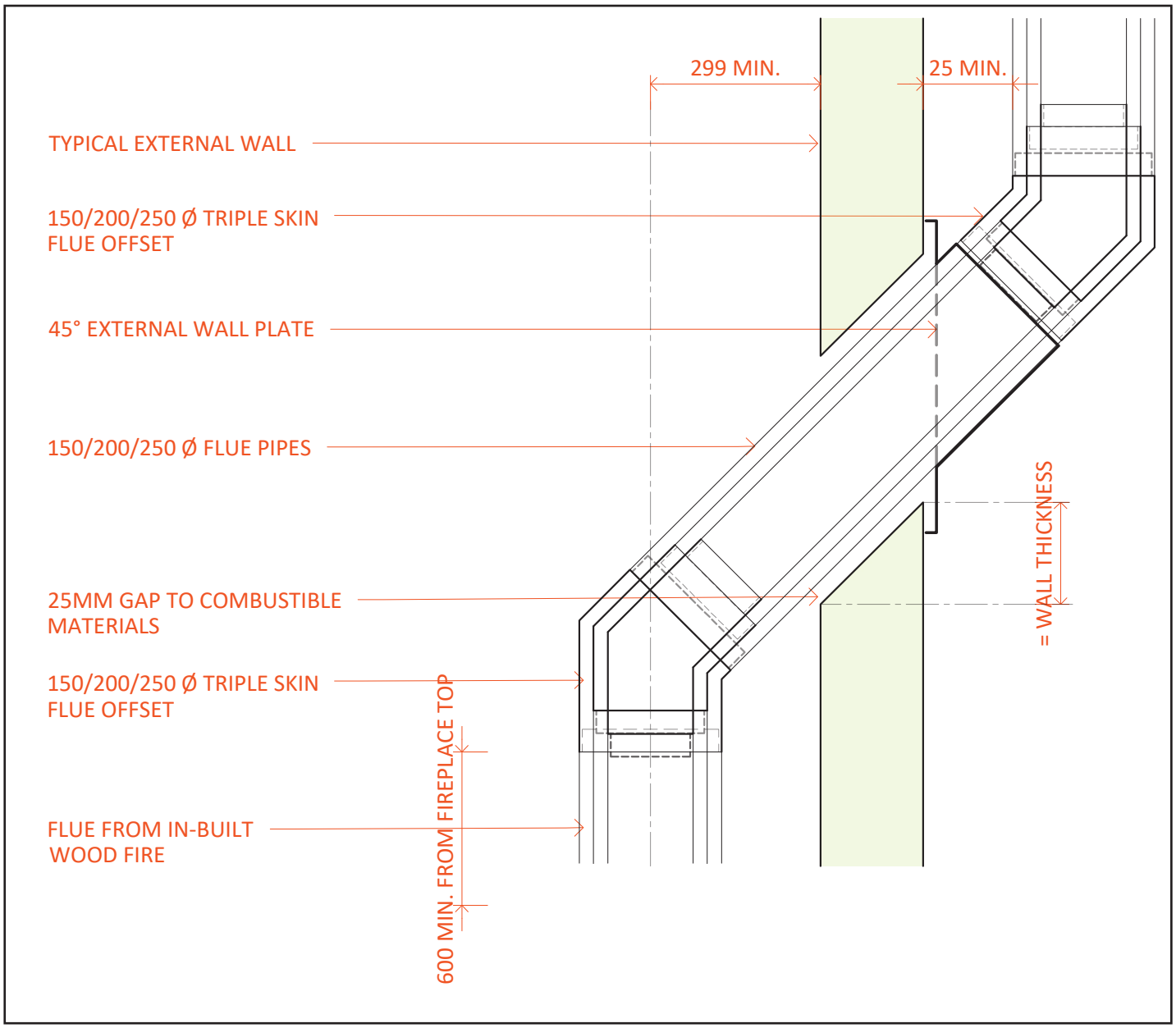
Where the flue penetrates a wall, this must be configured using two Escea flue accessories, to achieve a triple skin wall penetration. This should constitute:

903640 Indoor Wood Triple Skin Offset Kit

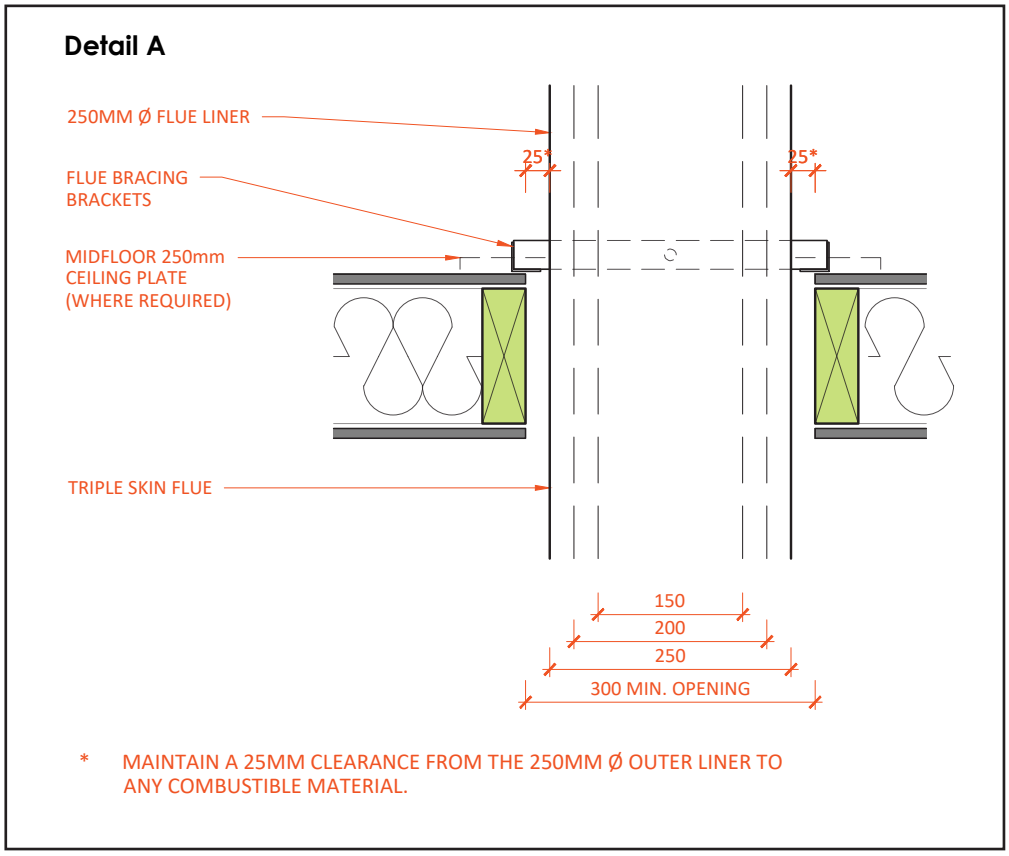
- 2x 45° Triple Skin Offset.
- 1x (150/200/250 x 1.2m) Triple Skin Flue Extension.

903653 45° External Wall Plate

- 250mm Ø x 45° External Wall Plate.



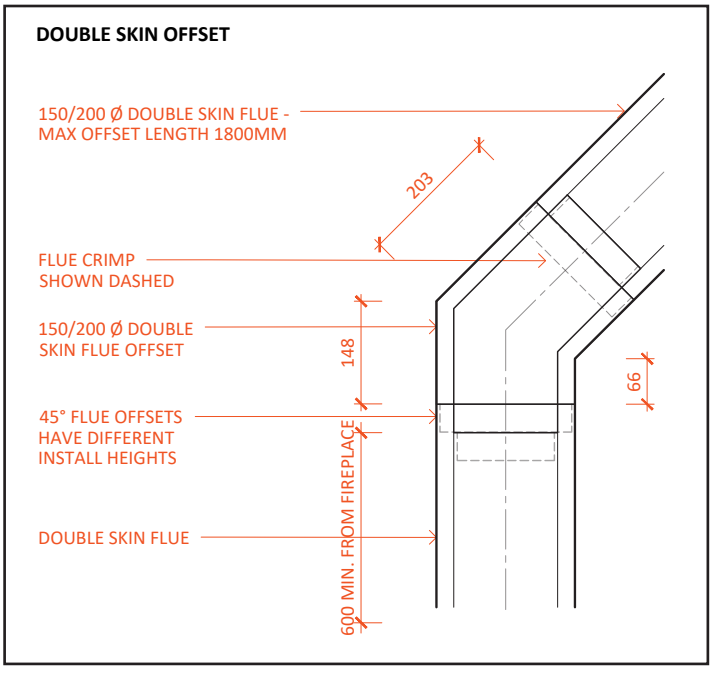
C9. CEILING AND MID-FLOOR DETAIL

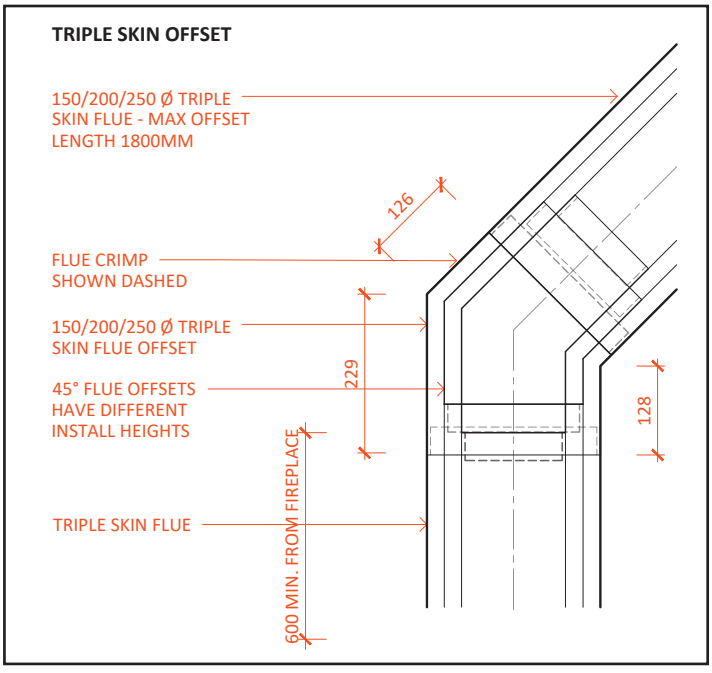


C10. FLUE OFFSETS

45° flue offsets and bends are available in double skin or triple skin variants. Double skin are to be used when offsetting above the fire and within the room (visible offset). A triple skin offset is used where the flue is passing through a chimney cavity, roof space, wall or mid-floor.

Flue offsets can reduce draughts within the flue pathway; it is recommended to avoid where possible or allow for an extension of the flue length to overcome the draught restriction, that an offset can make. Allow 600mm above the fireplace before an offset.





C11. INSPECTION, HANDLING AND STORAGE

- Check components for visible damage and verify parts supplied are correct for the installation. Photograph and damage and retain packaging until installation.
- Do not discard installation manuals or any included hardware.
- Disconnect power before handling any electrical components.
- Do not stack other items on top of the fireplace or other components.
- Store in a dry, covered, and well-ventilated area. Keep away from moisture, dust, and corrosive materials.
- Use two or more people or lifting equipment and never lift by the fascia or glass.
- Wear protective gloves to avoid injury and protect finishes.
- Don't tilt, drop, or use sharp tools near visible surfaces.
- Handle glass, liners, and fire-bricks with care to prevent damage.
- Keep the unit free from dust and debris prior to installation.

C12. TOOLS AND FIXINGS REQUIRED

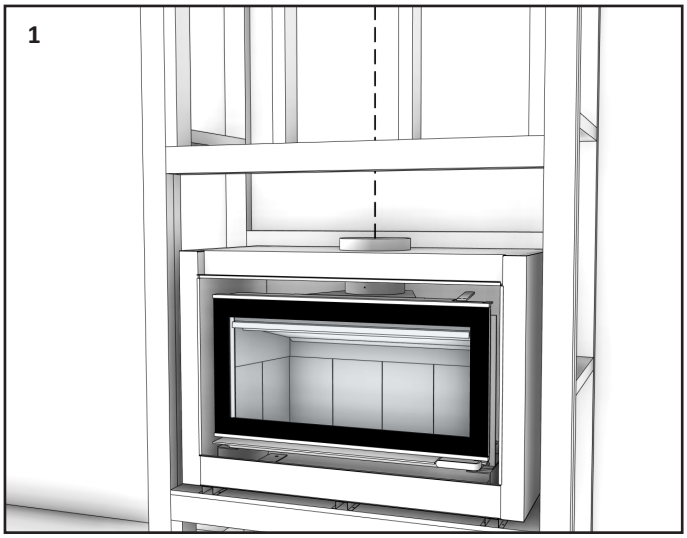
Installers need to supply:

- SS Blind Rivets (for securing flue sections)
- High Temperature Fire Cement (for sealing flue sections)
- Metal Straps or Brackets (for additional flue bracing inside the roof)
- 6G x 30 Tek Screws for fixing roof bracing
- External flue stays or wires (where required)
- Roof Flashings
- Senotherm Touch-up Paint

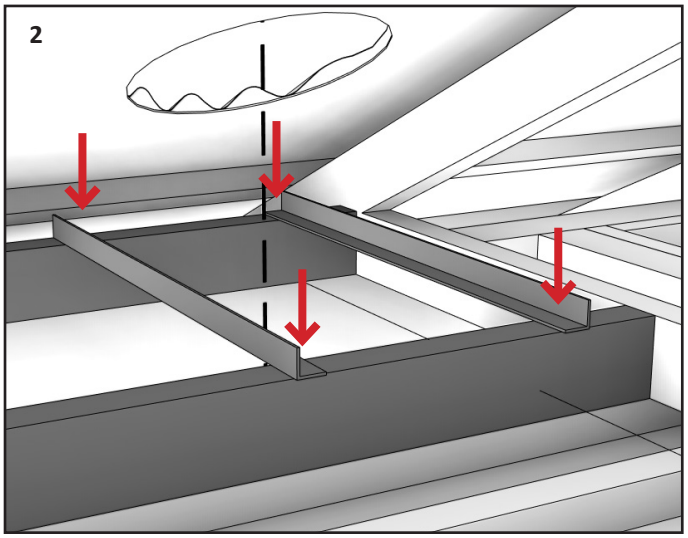
Tools Required:

- Tape Measure
- Level/Plumb Line or Laser
- Reciprocating Saw
- Snips or Grinder with Metal Cutting Disc
- Drill/Driver with Tek Screw Extension Bit (250mm)
- Rivet Gun
- Hammer
- Scaffolding/Ladder

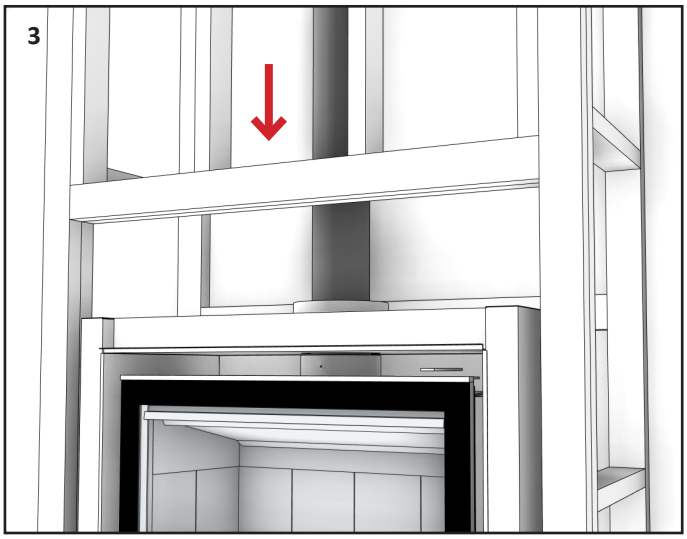
C13. FLUE INSTALLATION



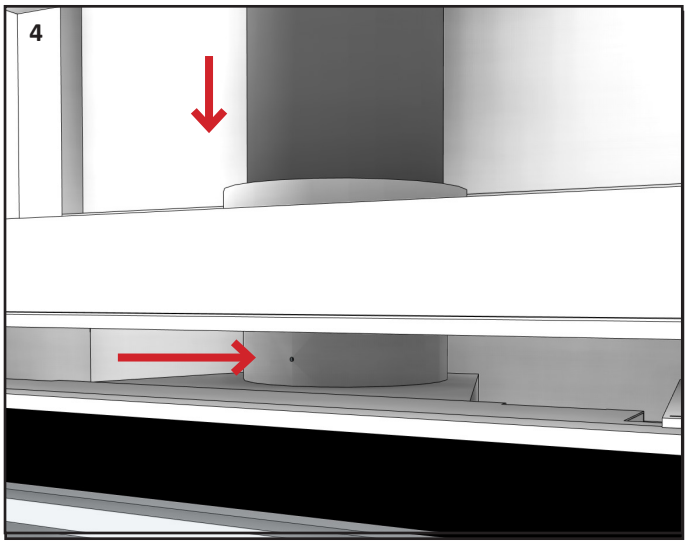
Locate the flue centreline from inside the building. Ensure the centreline is clear of any structural elements. Install the TC970 and ZCK following the previous instructions.



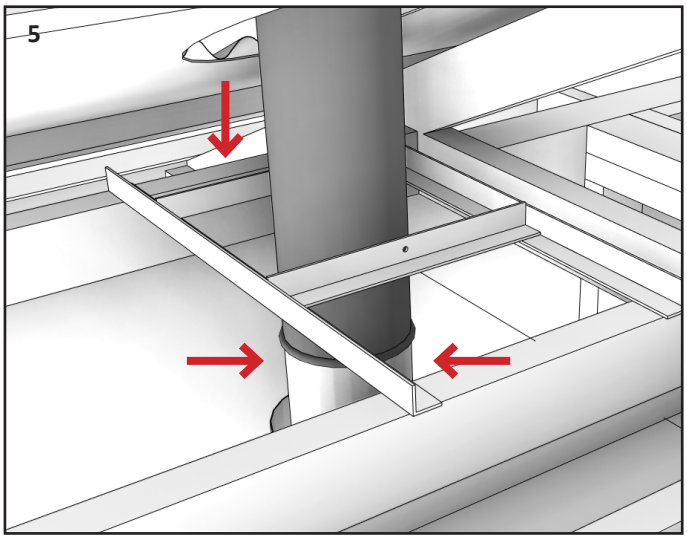
Create a hole in the ceiling and roof. Where the roof space is inaccessible or for a retrofit, removal of roofing and underlay may be required. Fit support framing and supplied flue support brackets as indicated.



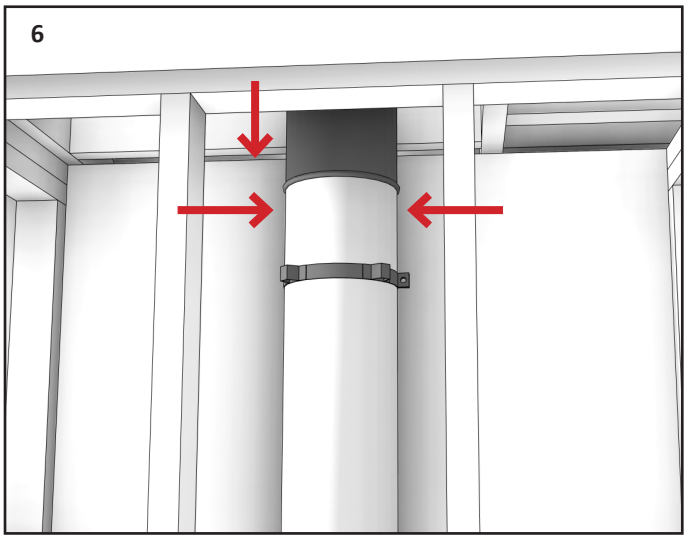
Fit the 150mm and 1200mm lengths of 150mm Ø flue together and drop onto 150mm Ø flue spigot with crimp down. Seal the 150mm Ø flue onto the flue spigot using Fire Cement.



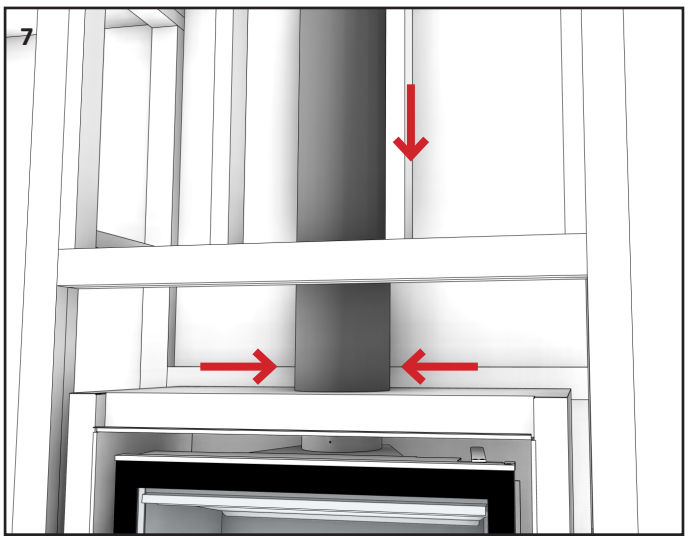
Lower the 200mm Ø flue liner (crimp down) over the 150mm Ø flue, and onto 200mm Ø flue spigot with crimp down. Connect the flues to the flue spigot by drilling a 5mm pilot hole through the 200mm flue liner using the hole in the spigot. Using an Extension Bit, screw through the 200mm Ø flue into the 150mm Ø flue, using the 12G x 40 SS Tek Screw (supplied with the fireplace), between the ZCK and the firebox.



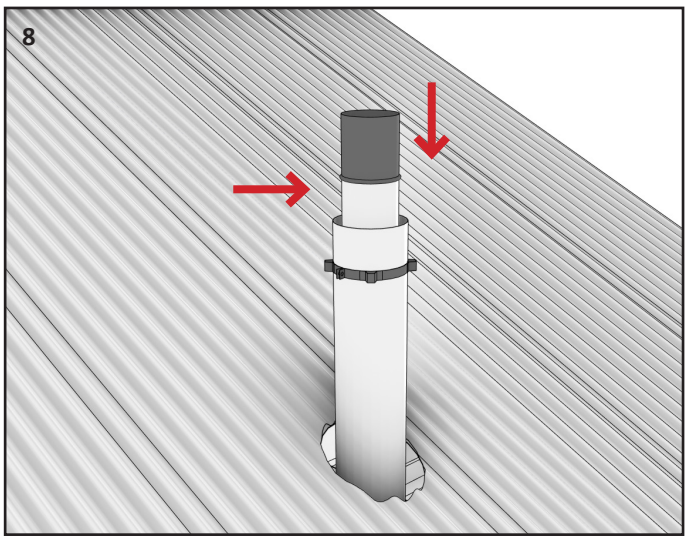
Drop the third length of 150mm Ø flue through the roof and onto the pipe already fitted. Seal and rivet the 150mm Ø flue lengths together.



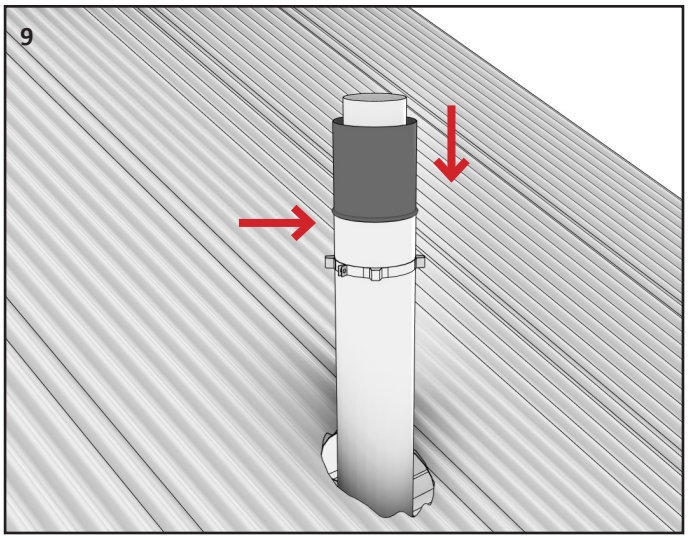
Lower the second length of 200mm Ø liner onto the first. Seal and rivet together. Fit the 200-250mm spacer onto the 200mm Ø liner.



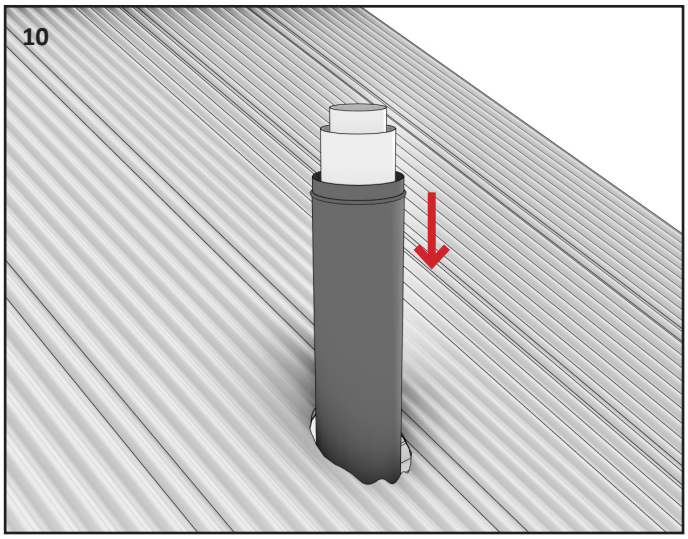
Fit the first 250mm Ø liner onto the zero clearance kit, crimp up and rivet in place.



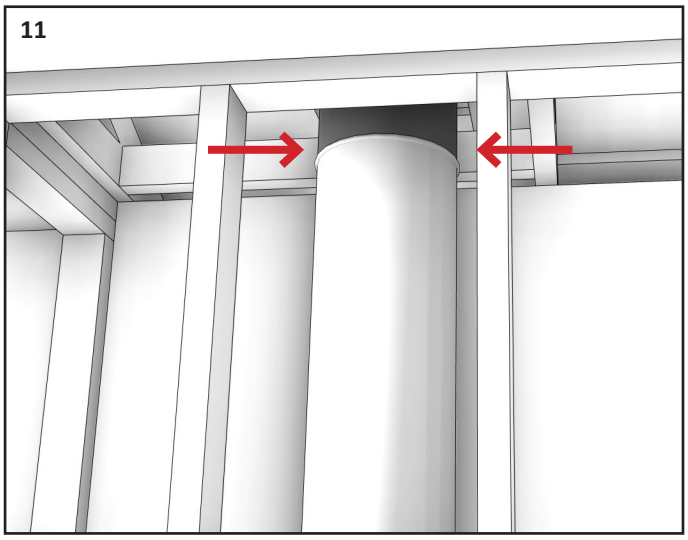
Trim the 150mm Ø flue to the required total flue height and lower onto the already installed flue. Seal and rivet in place. Fit the 200-250mm spacer onto the 200mm Ø liner.



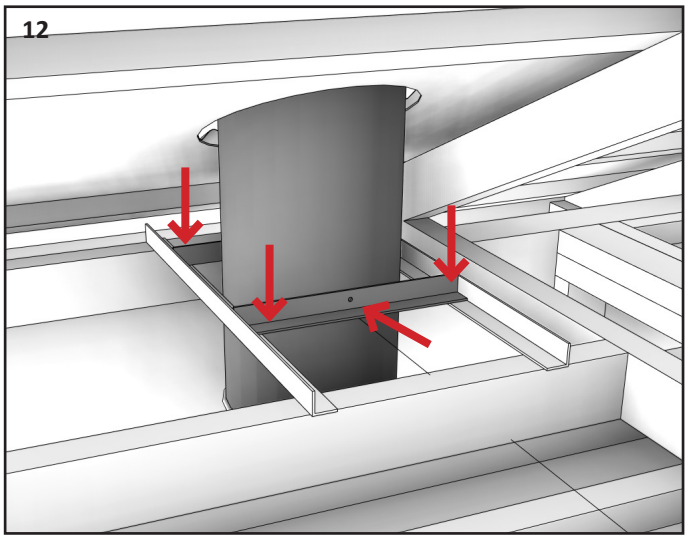
Trim the last 200mm Ø flue to the desired height, fit to the existing 200mm Ø flue liner and rivet in place. The 150mm Ø flue should be at least 75mm above the 200/250mm Ø flue liners. Height will be determined by the minimum flue length and meeting external clearances as defined in Sec. C3.



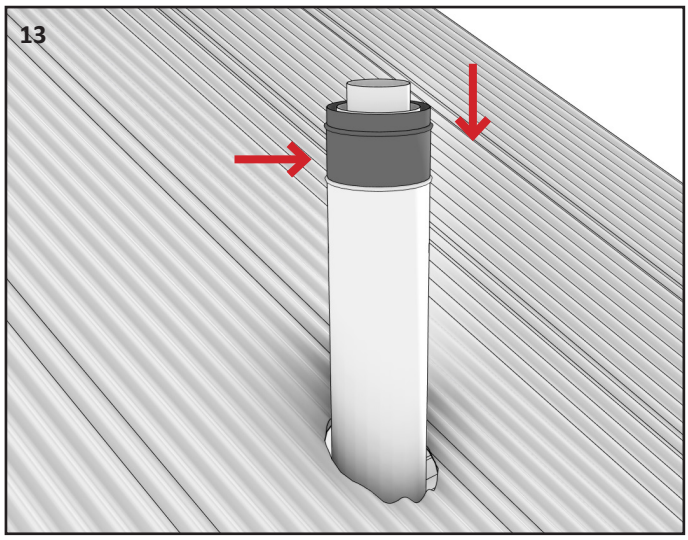
Fit the second 250mm Ø liner, into the cavity and onto the lower liner.



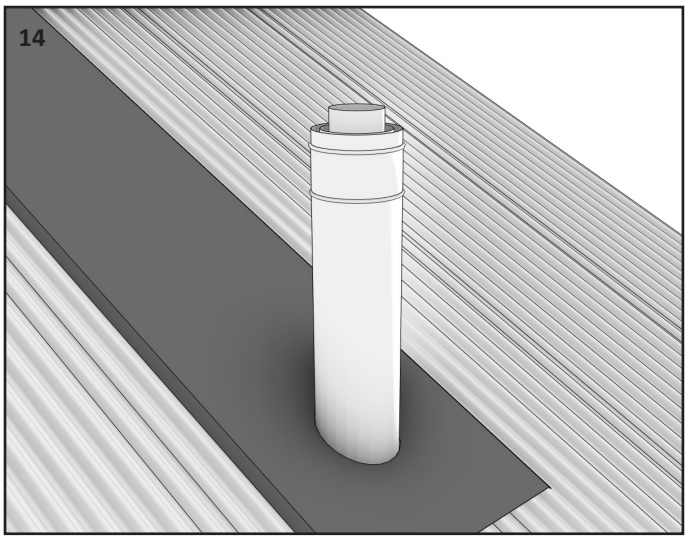
Rivet the 250mm Ø liner in place.



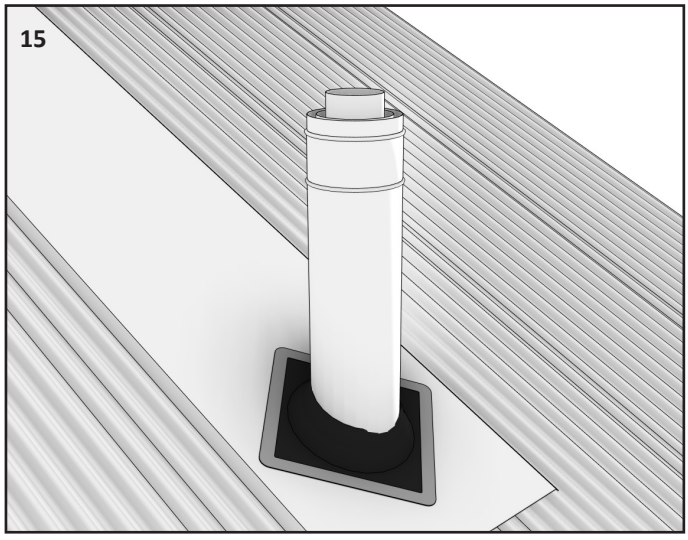
Having formed a cross braced support onto the roof framework, spacing them min. 250mm apart, fix the L-brackets together and cross braces to the 250mm Ø liner, with 6G x 30 Tek Screws.



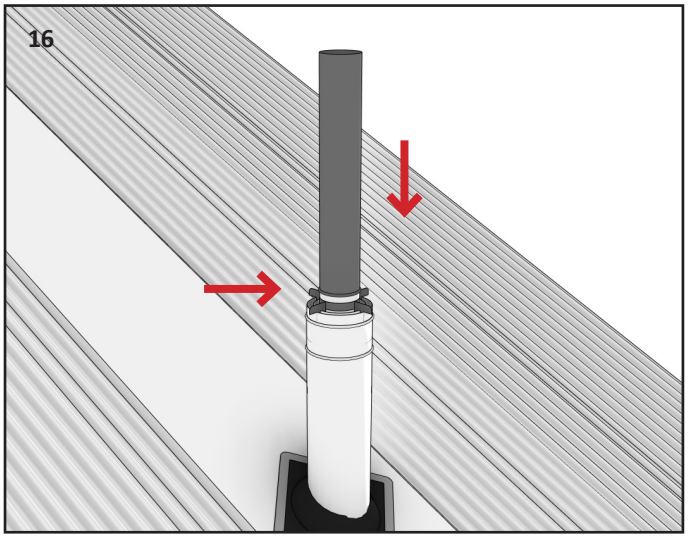
Trim the last 250mm Ø liner to the desired height, fit to the existing 250mm Ø flue liner and rivet in place. Fit any additional flue extensions where required and fix in place following the preceding steps.



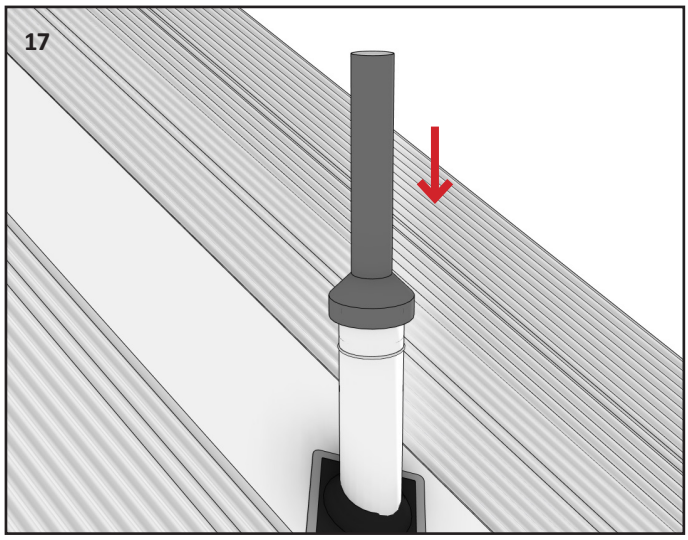
Roof flashings can be added as this point.



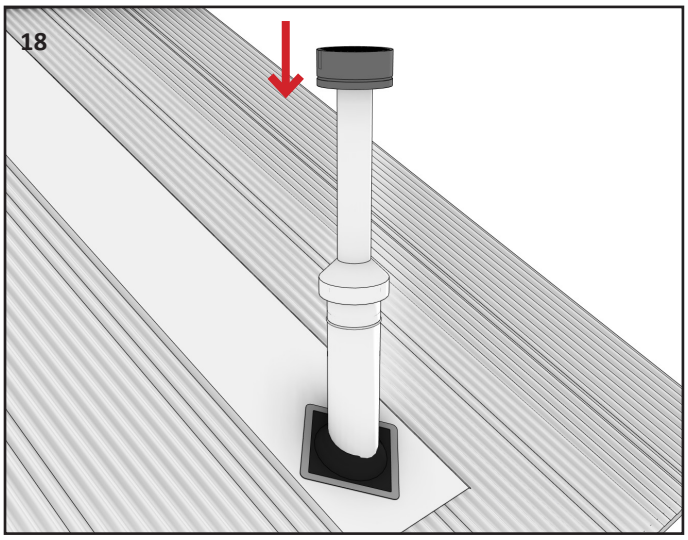
Seal the roof penetration with a dektite or a custom flashing detail.



Fit the 915mm long x 150mm Ø flue and lower to the swage. Seal and fix in 3 locations using SS rivets. Fix the spider bracket to 150mm Ø flue.

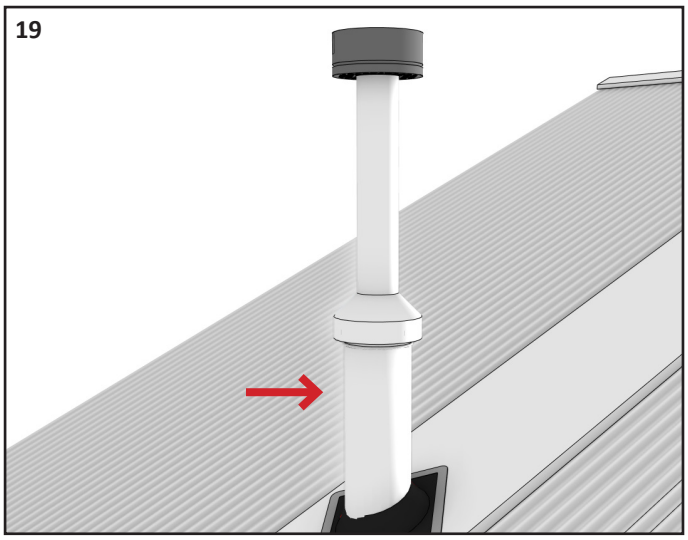


Slide the cone/casing cover over the 150mm Ø flue until it stops at the spider bracket.



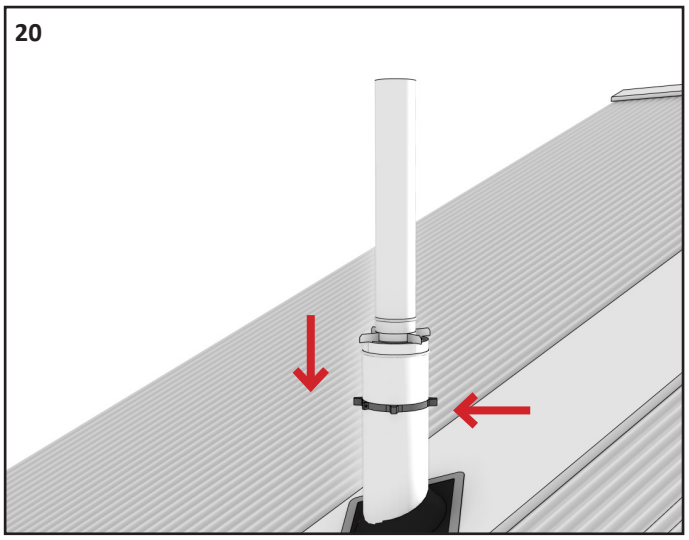
Fit the flue cowl onto the 150mm Ø flue and slide down until it cannot go any further. Flue installation is complete.

19



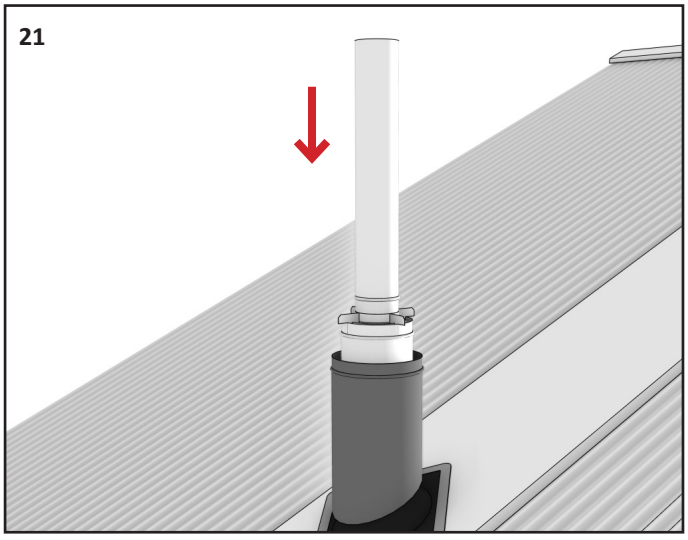
Installing the Designer Flue Shroud involves a few extra steps. Before fitting the cone and cowl, Fit the 250-320mm spider bracket onto the onto the lower 250mm Ø liner.

20



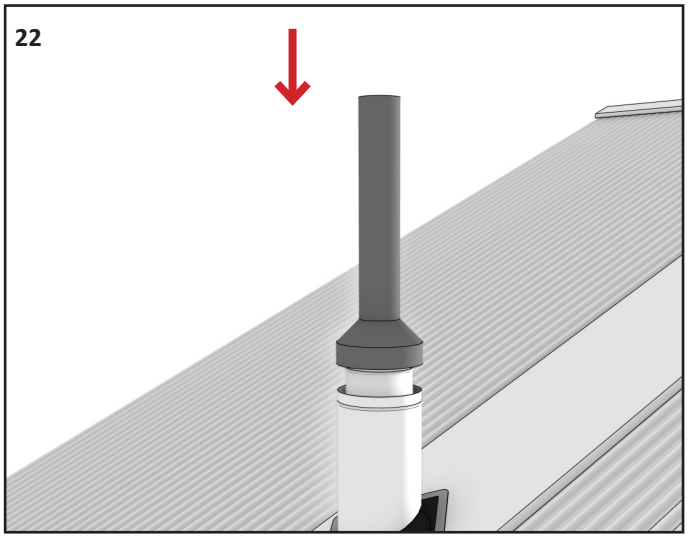
Trim the lower Designer Shroud following the roof pitch. The bottom of the shroud should be 100mm up from the roof surface. Fit the lower Designer Shroud over the flue pipes and rivet to the spider bracket. The top of the Lower Designer Shroud should be 160mm below the triple skin flue.

21



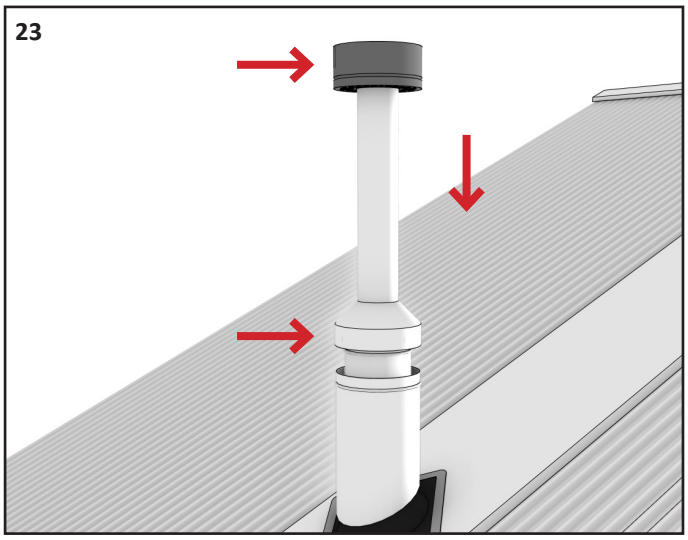
Slide the cone/casing cover over the 150mm Ø flue until it stops at the spider bracket.

22



Fit the flue cowl onto the 150mm Ø flue and slide down until it cannot go any further.

23

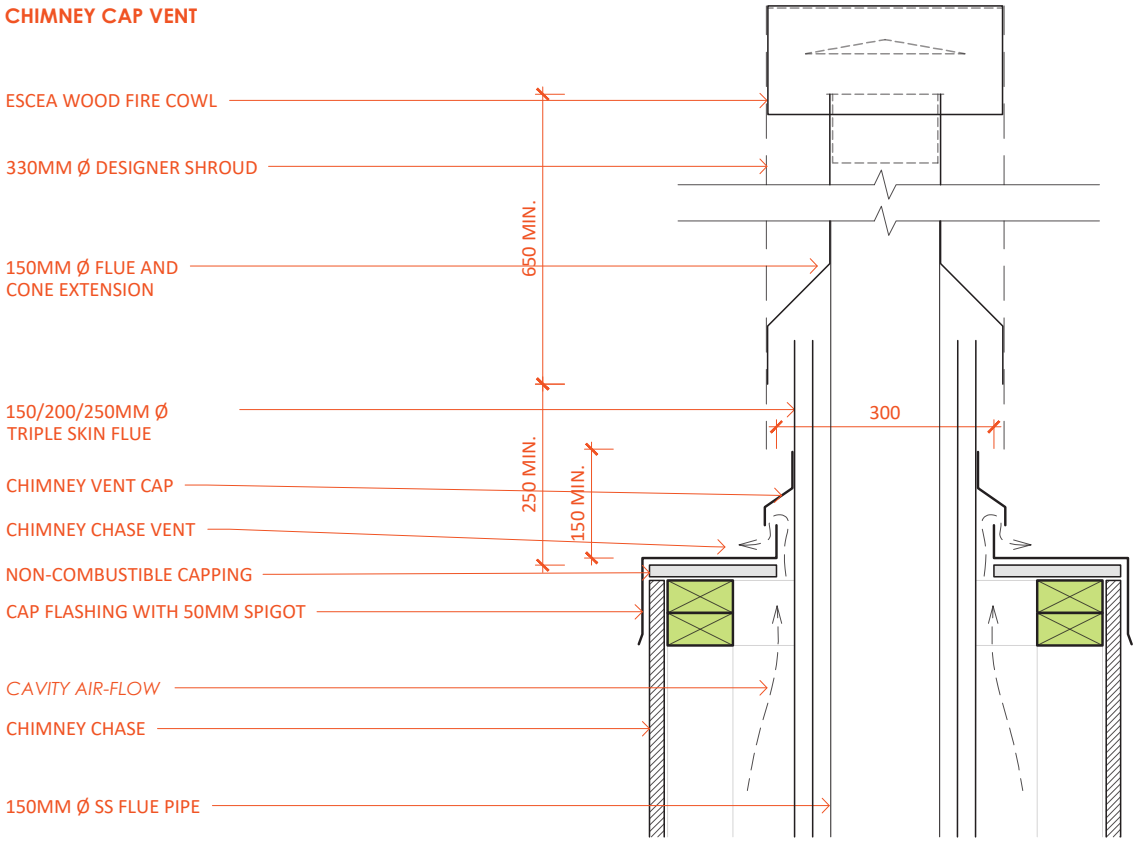


Lower the Upper Designer Shroud over the flue cowl and cone. The top of the Designer Shroud MUST line up with the top of the cowl. Screw fix to the cowl and cone.

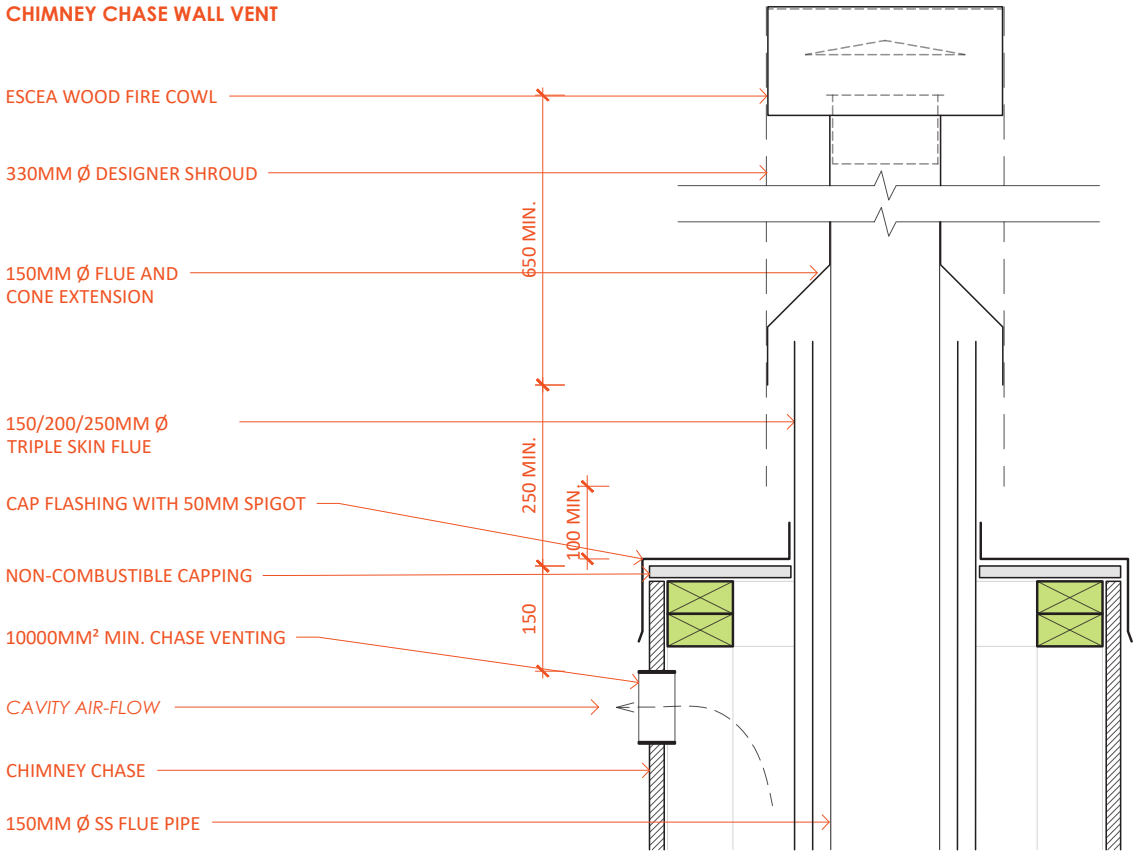
C14. CHIMNEY CHASE VENTILATION

Where a flue passes through a chimney chase, whether masonry or timber framed, it is to be vented in accordance with *AS/NZS 2918*, at the base of the cavity and at the top. Each ventilation opening is to have 10,000mm² free open area.

CHIMNEY CAP VENT



CHIMNEY CHASE WALL VENT



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D OPERATION INFORMATION

D1. FIRST LIGHTING

To ensure the best performance and long-term care of your wood fireplace, always use dry, well-seasoned softwood with a moisture content below 20%. Using damp wood can lead to poor combustion, excess smoke, and potential damage to the fireplace.
Your first few fires are an important part of the conditioning process. Start with a small fire using kindling and a couple of small logs. Gradually increase the size of the fire over two to three burns, moving from small logs to medium and then full-sized logs. This gradual approach allows internal moisture to evaporate, helps the high-temperature paint cure correctly, and prevents sudden temperature changes that could stress the firebox.
During these initial burns, you may notice condensation inside the firebox and a slight odour from the curing paint—both are normal and temporary. For comfort and safety, keep the room well-ventilated during this period to disperse any fumes.

D2. RECOMMENDED LIGHTING METHOD

Once the initial conditioning burns are complete, the fireplace is ready for regular use. Escea recommends the top-down lighting method, as it provides a slower, more controlled ignition and results in a cleaner, more environmentally responsible burn. Fuel loading should be done front to back. The fireplace is designed to light and operate without the door open.

Warning: Never use accelerants such as petrol or methylated spirits to light the appliance.

D3. FIREWOOD LOAD DETAILS (TFS650 MK2 AND TFS850 ONLY)

Seasoned firewood consisting of pieces 275mm to 325mm in length should be used.

Kindling with Intermediate Load 1

Load Start

TFS650 *(example above)*
Kindling: 20 pieces - 1.5kg in total.
Inter. Load 1: 4 pieces - 1.5kg in total.
TFS850
Kindling: 20 pieces - 1.5kg in total.
Inter. Load 1: 7 pieces - 2.0kg in total.

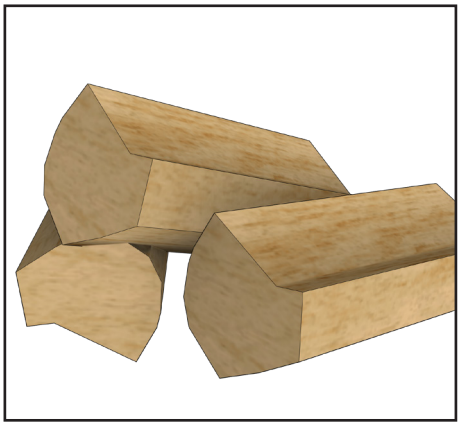
Intermediate Load 2

Ember base evident with minimal flame, approx. 50 mins.

TFS650 *(example above)*
Inter. Load 2: 4 pieces - 3.0kg in total.
TFS850
Inter. Load 2: 5 pieces - 3.5kg in total.

Main Load 2

Ember base evident with minimal flame, approx. every 65 mins.



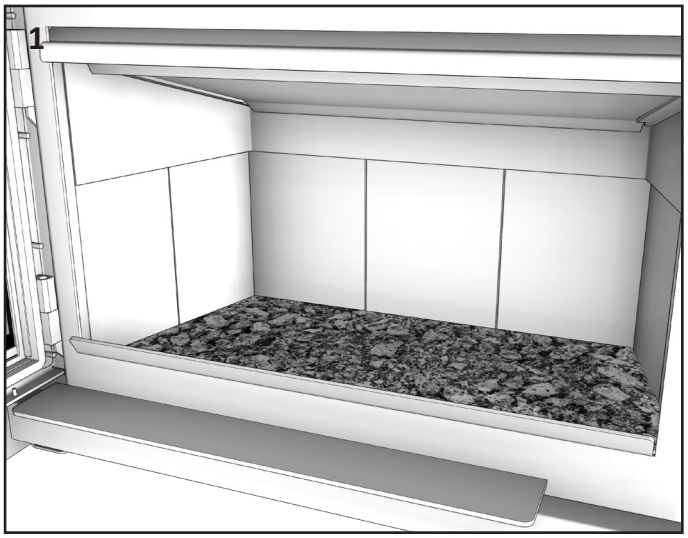
TFS650 *(example above)*
Main Load: 3 pieces - 4.0kg in total.
TFS850
Main Load: 6 pieces - 6.9kg in total.

D4. RE-LOADING PROCEDURE

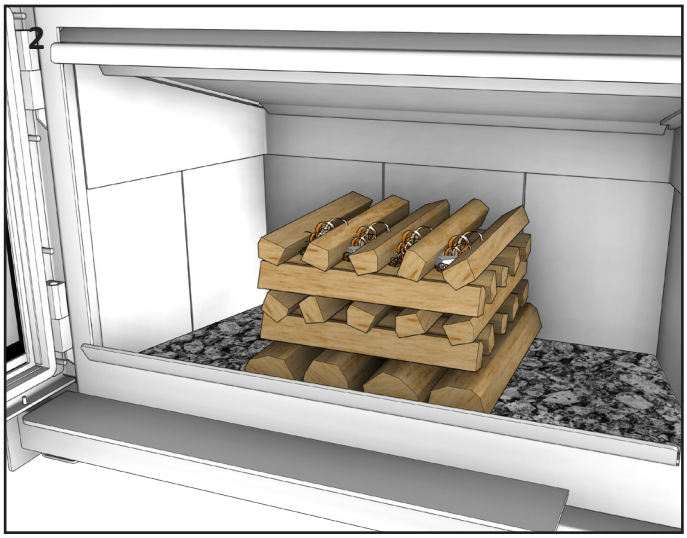
Let the fire burn down to a solid ember base with minimal flame. Before reloading, return the air control to high (far right), wait a moment and then open the door slowly. Reload immediately and close the door promptly. Once the new fuel is burning well, adjust the air control for your preferred heat level. *Note: This method ensures efficient combustion.*

Load firewood front to back to encourage a cleaner, more stable burn. Do not force the door closed—ensure logs are not obstructing the door or touching the glass. This process reduces the risk of smoke spillage due to pressure changes or external environmental effects.

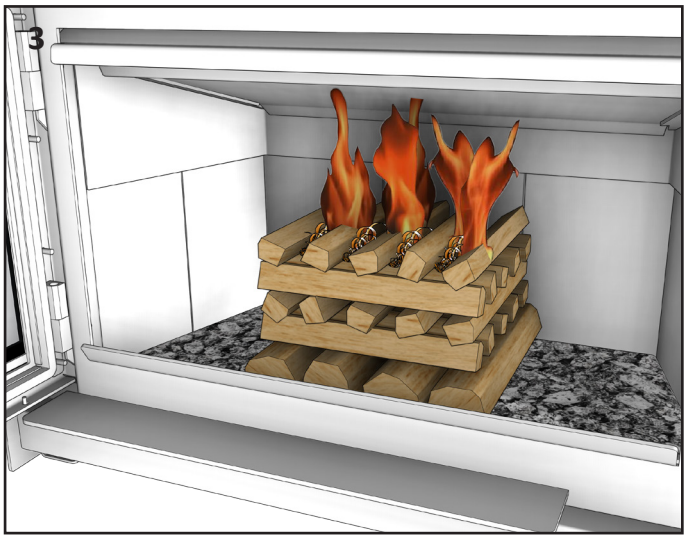
D5. TOP-DOWN LIGHTING METHOD *(APPLICABLE FOR ALL ESCEA INDOOR WOOD FIRES)*



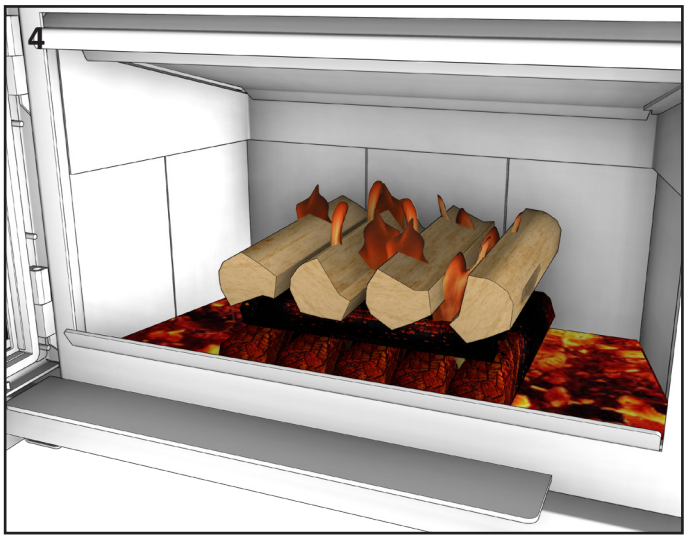
Ash Bed Preparation: *Ensure a layer of ash is present at the base of the firebox—approximately 25mm. When cleaning, always retain a residual ash bed to assist with ignition and thermal stability.*



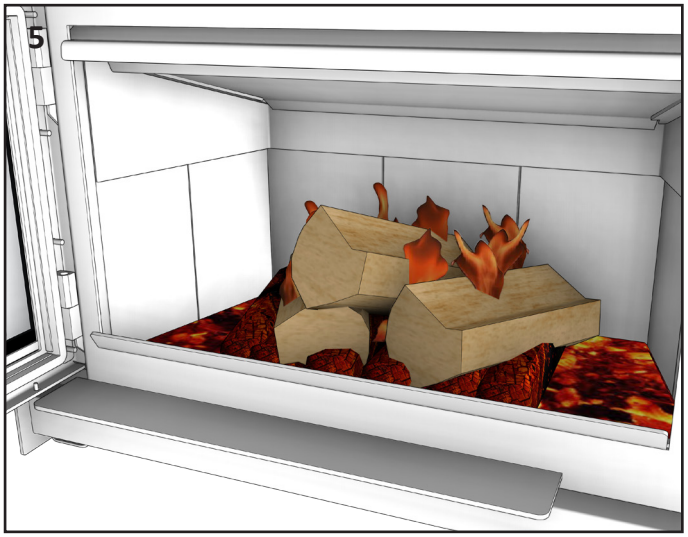
Log and Kindling Placement: *Place four medium-sized logs directly onto the ash bed. On top of these, lay a generous amount of kindling in a criss-cross pattern, with 25mm air gaps between to aid airflow.*



Fire-Lighters and Ignition: *Insert approximately four fire-lighters between the top layer of kindling. Ensure the air control is fully open (lever hard right). Ignite the fire-lighters and close the door immediately.*



Establish Ember Bed: *Allow the kindling and base logs to fully ignite and burn down to a hot ember bed with a small visible flame. Avoid opening the door and reloading while smoke is present and/or the fire is burning rapidly.*



Select three large logs as your main fuel load. With the air control set to high, open the door briefly, load the logs, and close the door promptly.

Temperature Management: *Once the fire is well-established and operating at optimal temperature, adjust the air control slider to suit your desired heat output.*

D6. FIREPLACE OPERATION

Over-firing occurs when the appliance is run excessively hot, resulting in elevated flue temperatures. This can cause premature wear or damage to internal components, increased emissions, and inefficient fuel consumption. To avoid over-firing:

- Do not burn excessive amounts of small, dry timber offcuts or framing timber.
- Avoid overloading the firebox—do not exceed 50% of its height with fuel.
- Use only well-seasoned firewood within the recommended moisture range.
- Do not operate the appliance with the door open or ajar. Doing so introduces excess air, which may lead to overheating and interfere with flue draft characteristics.

Operating with the door open can also compromise the Direct Vent system performance and increase the risk of flue gases entering the living space.

D7. PERFORMANCE ISSUES

Performance issues such as insufficient heat, excess smoke, or incomplete combustion can result from:

- Poor fuel quality (e.g., wet, unseasoned, or incorrect wood type).
- Improper operation or not following recommended burn procedures.
- Suboptimal installation or flue design.
- Unsealed flue spigot joint or joint leaks.
- Environmental factors such as down-drafts or negative pressure zones.

Smoke spillage can occur due to:

- Ventilation conflicts from extraction fans, rangehoods, or mechanical ventilation systems.
- Opening the door while the fire is vigorously burning—this can cause flames to surge forward, pushing smoke into the room.
- Negative pressure in the room drawing air down the flue.
- Environmental issues and site location, such as trees and hills.

These issues may lead to creosote build-up, blackened door glass, and a loss of heating efficiency. Operating a poorly performing fireplace may lead to excessive creosote accumulation and increase the risk of flue fires. If performance problems persist, refer to **Section E Service and Maintenance Information,** in this manual.

E SERVICE AND MAINTENANCE INFORMATION

E1. TROUBLESHOOTING

FAULT	CAUSE	SOLUTION
Black Glass	Inadequate or green/wet fuel.	Clean using damp newspaper dabbed in cold ash. This gently removes blackening or light residue from the inside surface. Addressing these factors will also significantly improve burn quality and reduce maintenance needs.
	Operating on low setting too early.	
	Overloading the fire with fuel on low settings.	
	Incorrect fuel orientation (e.g., side-to-side loading).	
	Worn door rope.	Contact escea.com for assistance.
	Leaking glass sealing tape.	Contact escea.com for assistance.
Black Glass at Start-up	Some blackening during start-up is normal when the fireplace and components are cold.	Once operating temperature is reached, this should clear. If not, it could indicate incomplete combustion/Low Heat (see below).
White Glass	Frosting or permanent stains can result from repeated very hot burns.	Regularly clean glass to avoid frosting.
		If visibility is severely impacted, glass replacement may be required. Contact escea.com for assistance.
Cracked Bricks	Repeated throwing of bricks into the firebox which hit the bricks.	Avoid throwing logs into the firebox to prevent cracking or dislodging.
	Hairline cracks are cosmetic and normal. If bricks maintain position and structure, performance is not affected.	
Noise	General ticking is a normal part of the wood fire heating and cooling process.	Nothing requires attention.
	Loud bangs are not normal.	Contact escea.com for assistance.
	In high wind zones, external wind noise around the flue system may occur.	While generally unavoidable, correct installation and flue termination height can help mitigate this.
Smell	First few burns assist in paint curing, which can cause a smell.	Open windows to release smell. Refer to Section D1 for further information.
	Persistent smells can be caused by using treated wood or chemicals used on the fireplace.	Use dry, untreated, seasoned wood that has a moisture content between 16-20%.
Smoke Spillage	Environmental effects.	High winds and internal/external pressure differentials between indoor and outdoor can increase smoke spillage when the door is opened.
	Over-fuelling.	Too much fuel when the fire is very low will cause a smouldering fire to develop. Close the door.
	Opening the door at incorrect times.	Only reload the fireplace when the ember bed has died down with no visible smoke.

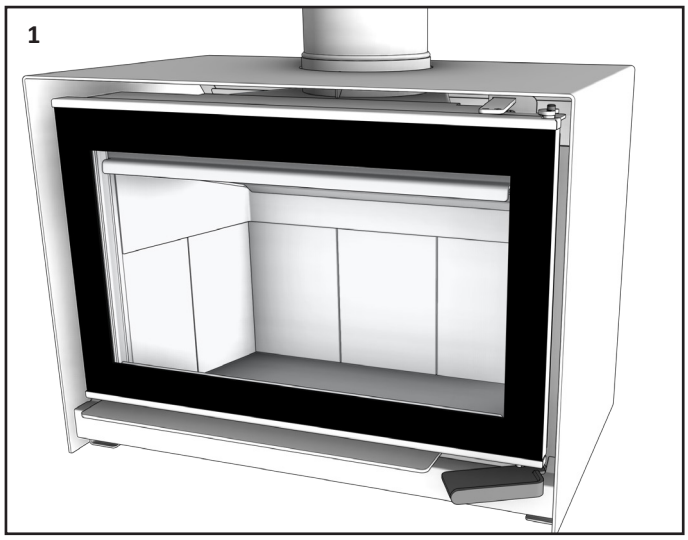
FAULT	CAUSE	SOLUTION
Incomplete Combustion/Low Heat	Inadequate or green/wet fuel.	Use dry, untreated, seasoned wood that has a moisture content between 16-20%.
	Possible blocked Direct Vent flue.	Have the flue cleaned and checked by a wood fire service technician or chimney sweep.
	Low fuel supply.	Ensure an adequate load to keep a hot fire sustained. If the firebox temperature drops the fire will burn poorly.
	Door and glass seals may wear out causing excess air supply and an increased combustion rate.	Contact escea.com for assistance.
Poor Seal	Maintaining a tight door seal is essential for proper combustion.	Ensure consistent, even contact around the door frame when closed. Replace door rope if required. Contact escea.com for assistance.
	Door may move from high heat.	Realign door by following the adjustment process in Section E6.
Door Catching	Door handle can drop over time due to the high levels of heat generated from the fireplace.	See Section E8 for adjustment.
Door Not Latching	Doors can move over time due to the high levels of heat generated from the fireplace.	See Section E7 for adjustment.
Damaged Paint	Persistent knocks to surfaces	Damaged paintwork can be touched up using Senotherm Black spray paint, available through Escea retailers.
	Green, treated or wet fuel.	Use dry, untreated, seasoned wood that has a moisture content between 16-20%.
	Chemical cleaning agents used to clean surfaces.	Use only a dry lint-free cloth or a lightly damp cloth to clean surfaces. Damaged paintwork can be touched up using Senotherm Black spray paint, available through Escea retailers.

E2. GENERAL SERVICING

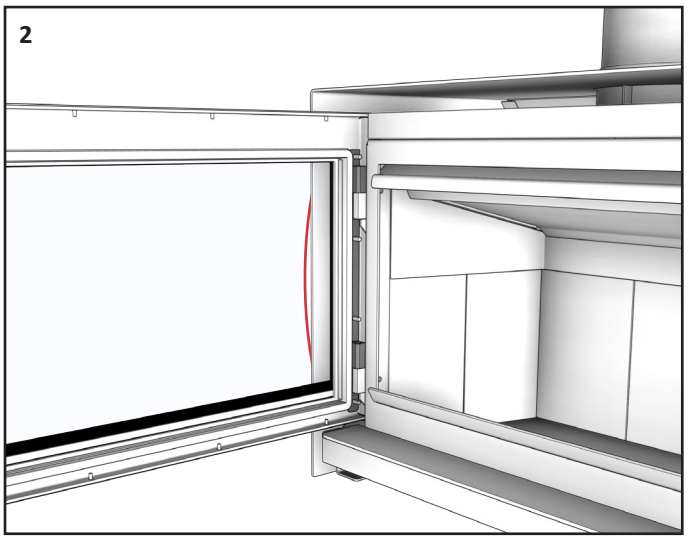
To ensure optimal performance and longevity of your Escea Wood Fireplace, maintenance is essential. This includes an annual service, ideally conducted by an Escea Authorised Agent, and more frequent checks depending on how heavily the appliance is used. Regular and annual inspections should cover:

- **Care of Painted Surfaces:** Wipe down regularly with a dry lint-free cloth. Avoid cleaning the appliance while it's hot.
- **Check and Clean the Glass:** Regular maintenance of the glass improves viewing and prolongs the glass life. Never clean the glass while it is hot, as this may lead to cracking or permanent damage.
- **Ash Build-Up:** Remove accumulated ash regularly, but leave at least 20mm of ash bed at all times.
- **Bricks:** Inspect the condition of refractory bricks, annually.
- **Baffle System:** Confirming the integrity and placement of the baffle system. Inspect the baffle position and condition periodically. Ensure it is seated correctly on the side supports and positioned flat against the rear air inlet at the back of the firebox. Any misalignment may affect airflow and efficiency.
- **Check Door Rope and Door Seal:** Check the door seal annually, by visual inspection or by placing a piece of paper between the front of the firebox and door seal, then close the door as normal. The paper should stay in place but be removed with light pulling.
- **Flue Cleaning:** Have the flue cleaned and checked annually by a wood fire service technician or chimney sweep, or more regular if the fireplace is used often.

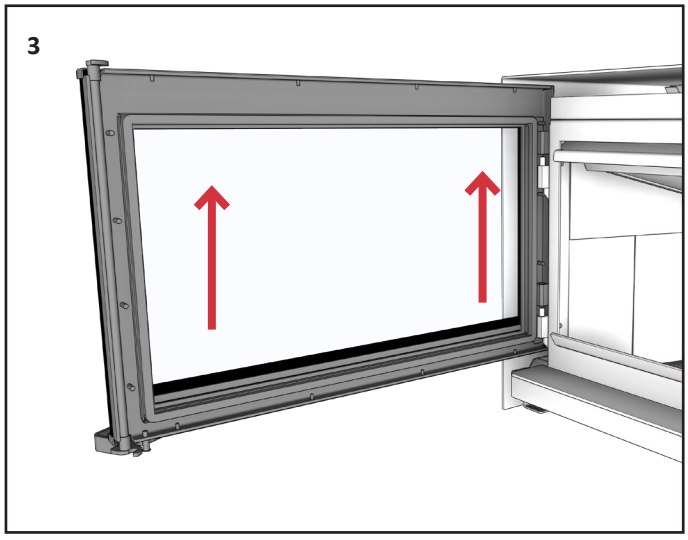
E3. DOOR REMOVAL



Rotate handle away from the centre of the fireplace.



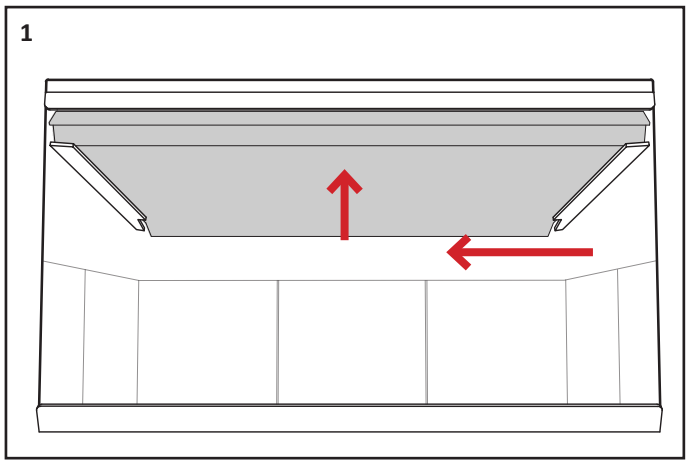
Swing door open to approx. 90°.



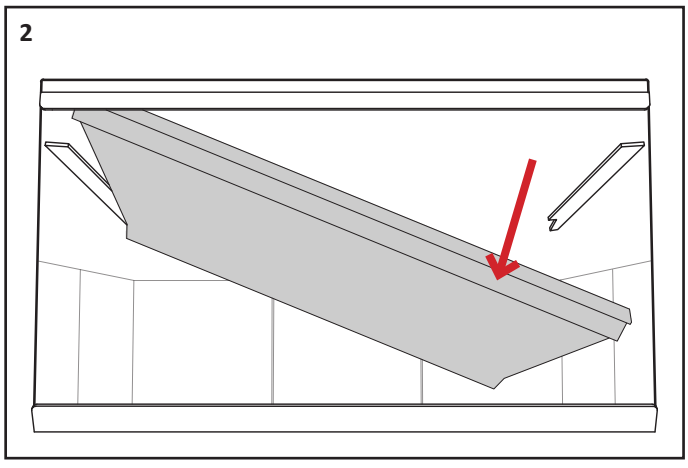
With two hands, lift door up off the hinge pins and set carefully aside.

E4. BAFFLE REMOVAL

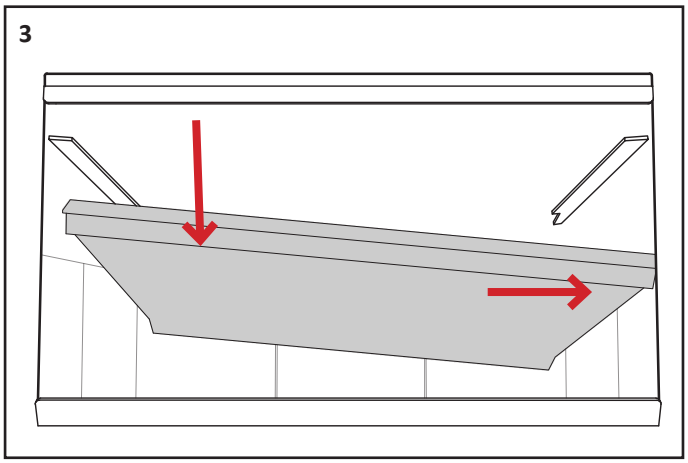
To remove the baffle:



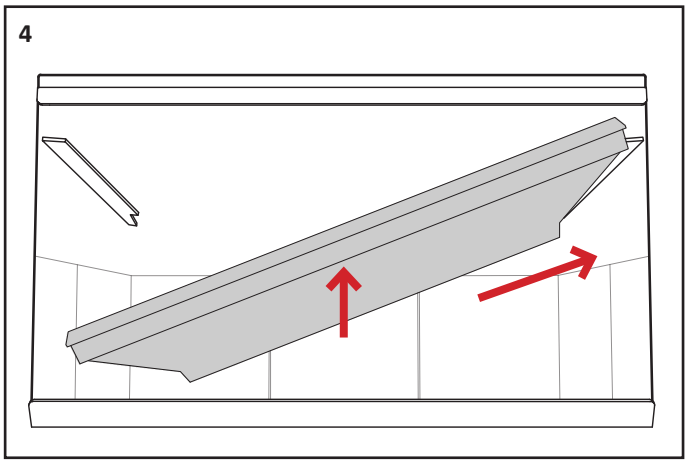
Pull the baffle forward and then slide left.



Lower the right side down.



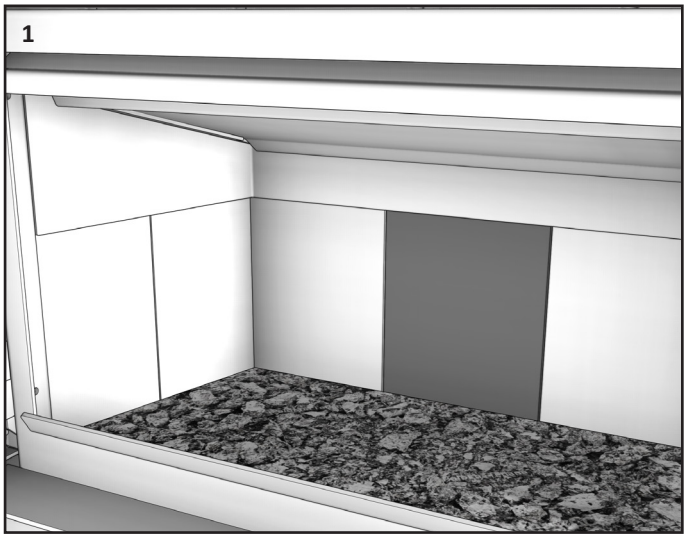
Shift right, lower the left side.



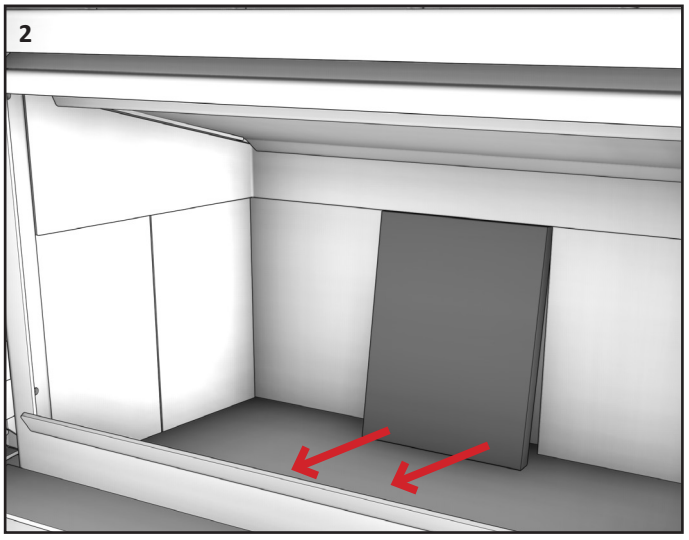
While lowering the left side, raise the right side and pull towards you to remove. Reverse this process to reinstall, confirming the baffle is seated flat against the rear wall and on the side supports.

E5. BRICK REMOVAL

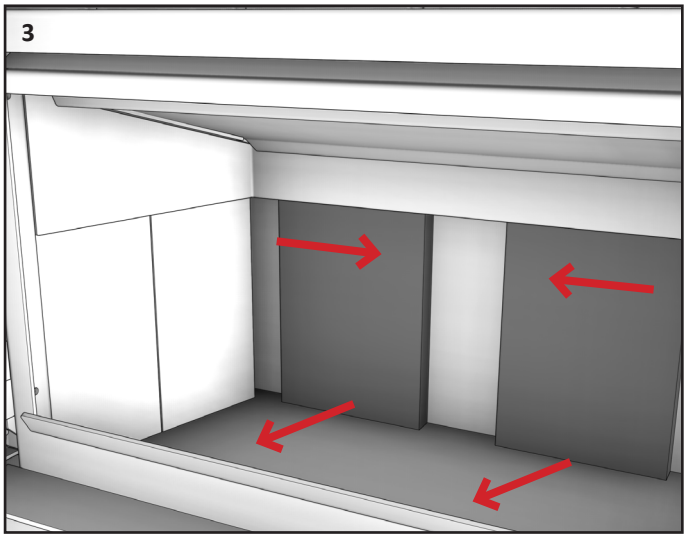
To remove the refractory bricks:



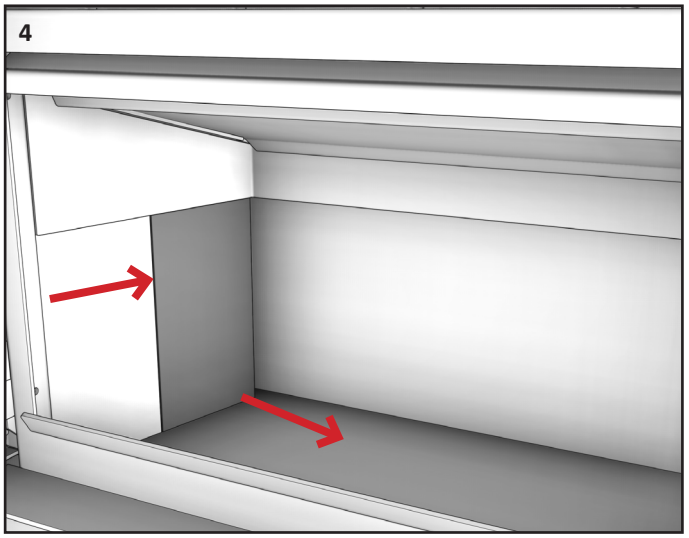
Remove all ashes from the firebox.



Start with the centre rear brick, lifting slightly and pull forward.



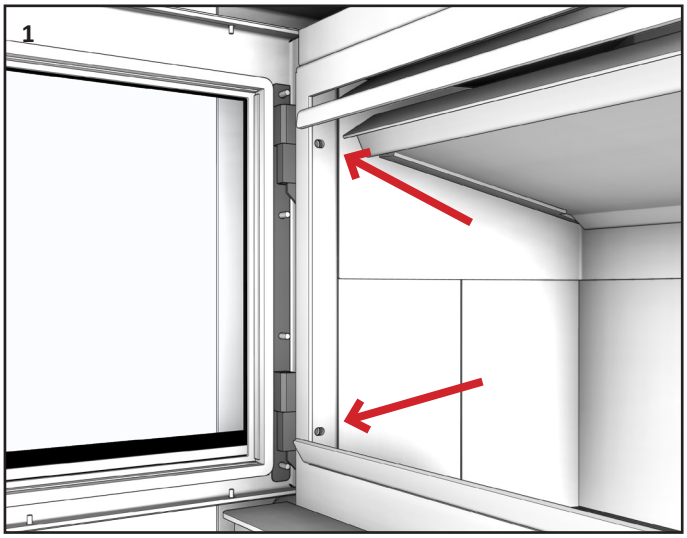
Remove the remaining rear bricks, followed by the rear side bricks.



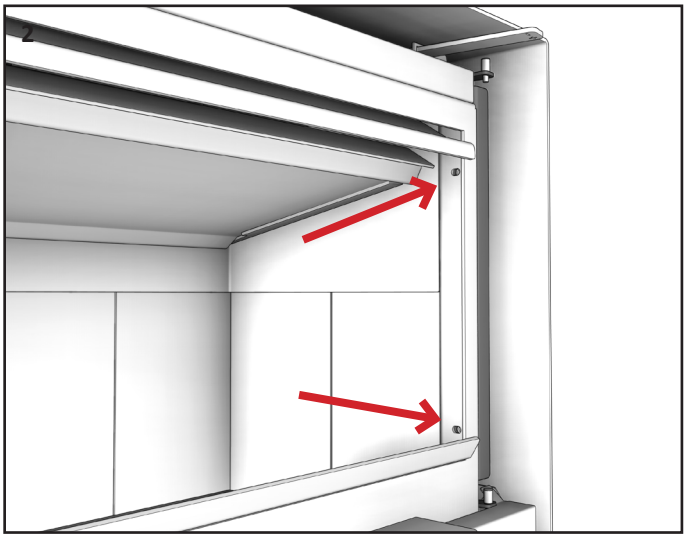
Slide the remaining front side bricks to the rear, and remove. Reverse the process to reinstall.

E6. ADJUSTING THE DOOR COMPRESSION

By loosening the Allen head screws inside the firebox, the hinge mounting plate (left side) or latch plate (right side) can be moved in and out to increase or decrease the door rope compression. Ensure even contact around the door frame when closed.



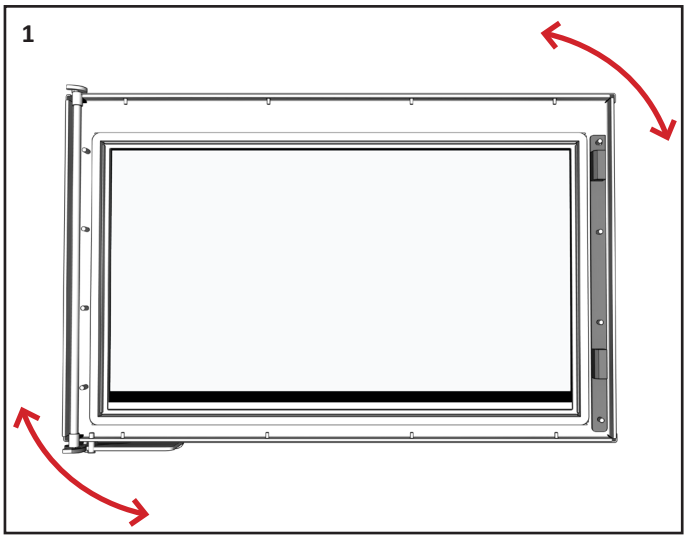
Locate the hinge mounting plate on the left side of the firebox.



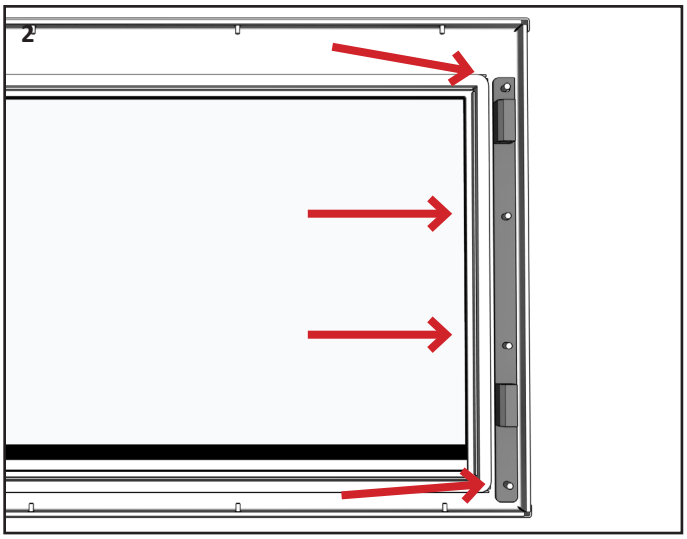
Locate the latch plate on the right side of the firebox.

E7. ADJUSTING FOR DOOR RACKING

Over time the door may move out of square/rack to the firebox. The door hinge plate allows movement to the lift either side of the door up or down.



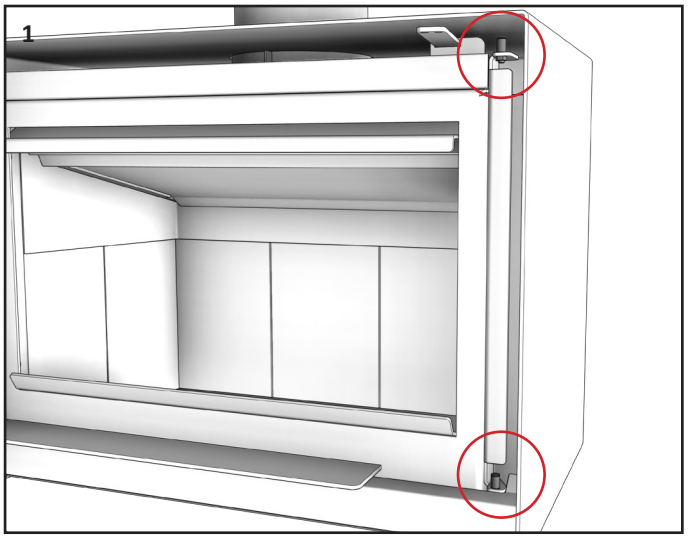
This process will lift the door up or down at each end of the door to stop any racking.



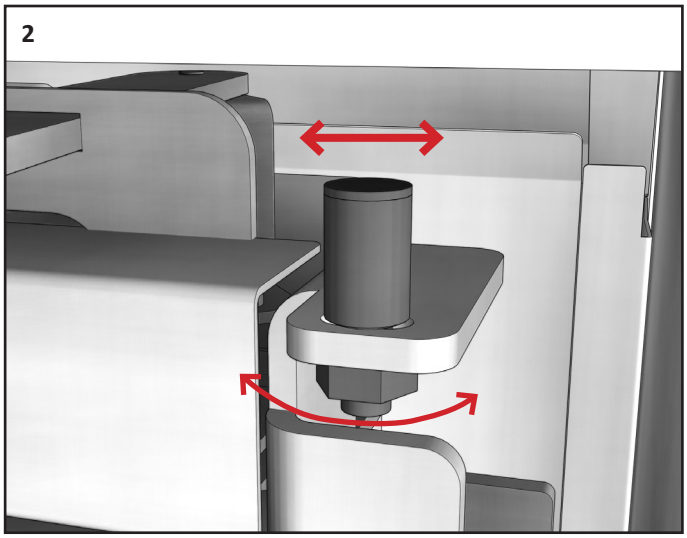
Adjusting the door hinge plate by loosening the 4x M6 nuts, on the inside of the door.

E8. ADJUSTING THE DOOR CATCH ROLLERS

Over time the door handle and latch system may not fully engage. To adjust the upper and lower door latch rollers:



Locate the door latch rollers circled above.



Loosen the nuts under the rollers. Move the roller side to side to achieve correct latch engagement. Re-tighten nuts to secure.

E9. PARTS DIAGRAM

The parts diagram below indicates replaceable parts for the TFS650 MK2, TFS850, TFS1000 MK2, and TC970.